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10 **SUPERIOR COURT OF THE STATE OF CALIFORNIA**  
11 **COUNTY OF LOS ANGELES, CENTRAL DISTRICT**

13 **COORDINATION PROCEEDING**  
14 **SPECIAL TITLE [RULE 3.400]**

15 **SOCIAL MEDIA CASES**

16 **THIS DOCUMENT RELATES TO:**

17 *All Cases*  
18 (CHRISTINA ARLINGTON SMITH, ET AL., V. TIKTOK  
19 INC., ET AL., CASE NO. 22STCV21355)

**JUDICIAL COUNCIL COORDINATION**  
**PROCEEDING NO. 5255**

Filed in Case No. 22STCV21355

Judge: Hon. Carolyn B. Kuhl  
SSC-12

**MASTER COMPLAINT (PERSONAL**  
**INJURY)**

**JURY TRIAL DEMANDED**

**TABLE OF CONTENTS**

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

I. INTRODUCTION ..... 1

II. THE PARTIES ..... 7

    A. PLAINTIFFS..... 7

    B. DEFENDANTS..... 8

        1. Meta..... 8

        2. Snap..... 9

        3. ByteDance ..... 9

        4. Google ..... 10

III. JURISDICTION AND VENUE..... 11

IV. FACTUAL ALLEGATIONS ..... 12

    A. GENERAL FACTUAL ALLEGATIONS APPLICABLE TO ALL DEFENDANTS..... 12

        1. Defendants have targeted children as a core market. .... 12

        2. Children are uniquely susceptible to harm from Defendants’ apps. .... 14

        3. Defendants designed their apps to attract and addict youth. .... 21

        4. Millions of kids use Defendants’ products compulsively. .... 28

        5. Defendants’ apps have created a youth mental health crisis. .... 30

        6. Defendants could have avoided harming Plaintiffs..... 39

        7. Defendants consistently refer to and treat their apps as products. .... 41

    B. FACTUAL ALLEGATIONS AS TO META..... 46

        1. Background and overview of Meta’s products. .... 46

            a. Meta’s origins and the development of Facebook. .... 48

            b. Modifications of Facebook’s product features over time..... 50

            c. Facebook’s acquisition and control of Instagram..... 58

            d. Modifications of Instagram’s product features over time. .... 61

        2. Meta intentionally encourages youth to use its products and then leverages that usage to increase revenue. .... 66

        3. Meta intentionally designed product features to addict children and adolescents. .... 76

            a. Meta has failed to implement effective age-verification measures to keep children off Facebook and Instagram. .... 76

            b. Facebook’s and Instagram’s parental controls are defective..... 84

            c. Facebook and Instagram were intentionally designed to addict its users..... 87

            d. To combat declining revenue drivers, Meta further revamped its algorithms to maximize addictive efficacy, despite increased awareness of palpable harm to youth ..... 97

            e. Meta’s defective product features cause negative appearance comparison and social comparison ..... 104

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

- f. Facebook’s and Instagram’s defective features include impediments to discontinuing use..... 117
- 4. Meta has concealed from Plaintiffs, the public, and Congress the harmful effects that Instagram’s and Facebook’s design have on children. .... 119
- 5. Meta facilitates the spread of CSAM and child exploitation. .... 137
- 6. Meta failed to adequately warn Plaintiffs or Consortium Plaintiffs about the dangers and harms caused by Instagram and Facebook, or provide instructions regarding safe use. .... 145
- C. FACTUAL ALLEGATIONS AS TO SNAP ..... 147
  - 1. Background and overview of Snapchat..... 148
  - 2. Snap targets children. .... 149
    - a. Snap has designed its Snapchat product to grow use by children to drive the company’s revenue..... 149
    - b. Snap promotes Snapchat to children. .... 153
  - 3. Snapchat is designed to addict children through psychological manipulation. .... 157
    - a. Snap designed Snapchat to drive compulsive use through a set of social metrics and other manipulation techniques that induce compulsive use. .... 158
      - (i) Snapscores..... 158
      - (ii) Trophies, Charms, and Stickers..... 160
      - (iii) Snap Streak..... 161
      - (iv) Push Notifications ..... 164
      - (v) Impediments to Discontinuing Use ..... 164
    - b. Snap’s defective features are designed to promote compulsive and excessive use. .... 165
      - (i) “Stories” and the “Discover” Interface ..... 165
      - (ii) “Spotlight” ..... 167
  - 4. Snap designed Snapchat with features that harm children directly or expose children to harm. .... 167
    - a. Disappearing “Snaps” and “My Eyes Only” encourage destructive behavior among Snap’s teen users. .... 167
    - b. Snapchat’s “Snap Map” feature endangers children. .... 169
    - c. Snapchat’s “Quick Add” feature endangers children..... 169
    - d. Snapchat’s Lenses and Filters features promote negative appearance comparison. .... 170
  - 5. Snap has implemented ineffective and misleading parental controls, further endangering children. .... 173
  - 6. Snap facilitates the spread of CSAM and child exploitation..... 174
  - 7. Snap failed to adequately warn Plaintiffs about the harms its product causes or provide instructions regarding safe use..... 178
- D. FACTUAL ALLEGATIONS AS TO BYTEDANCE ..... 179

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

1.	Background and overview of TikTok. ....	182
2.	ByteDance intentionally encourages youth to use its product and then leverages that use to increase revenue.....	183
3.	ByteDance intentionally designed product features to addict children and adolescents. ....	184
a.	TikTok’s age-verification measures are dangerously defective....	185
b.	TikTok’s parental controls are dangerously defective. ....	187
c.	ByteDance intentionally designed TikTok’s defective features and algorithms to maximize engagement using automatic content, time-limited experiences, intermittent variable rewards, reciprocity, and ephemeral content. ....	188
d.	ByteDance’s defective features inflict impossible image standards and encourage negative appearance comparison.....	207
4.	ByteDance Materially Contributes to Content on TikTok. ....	210
a.	ByteDance’s defective features include impediments to discontinuing use.....	212
5.	ByteDance failed to adequately warn Plaintiffs about the harms its product causes or to provide instructions regarding safe use. ....	214
6.	ByteDance facilitates the spread of CSAM and child exploitation.....	217
7.	Bytedance Knows That TikTok Harms Many Young Users. ....	220
E.	FACTUAL ALLEGATIONS AS TO GOOGLE.....	221
1.	Background and overview of YouTube. ....	221
2.	Google intentionally encourages youth to use YouTube and then leverages that use to increase revenue.....	223
3.	Google intentionally designed product features to addict children and adolescents. ....	228
a.	Google’s age-verification measures and parental controls are defective. ....	229
b.	YouTube is defectively designed to inundate users with features that use intermittent variable rewards and reciprocity. ....	231
c.	Google’s algorithms are designed to maximize “watch time.” ....	235
d.	YouTube’s defective features include impediments to discontinuing use.....	246
5.	Google facilitates the spread of CSAM and child exploitation.....	247
6.	Google failed to adequately warn Plaintiffs about the harm its products cause or provide instructions regarding safe use.....	252
V.	TIMELINESS AND TOLLING OF STATUTES OF LIMITATIONS.....	254
VI.	PLAINTIFFS’ CLAIMS.....	255
	COUNT 1: STRICT LIABILITY – DESIGN DEFECT (Against All Defendants) .....	256
	COUNT 2: STRICT LIABILITY – FAILURE TO WARN (Against All Defendants). .....	261
	COUNT 3: NEGLIGENCE – DESIGN (Against All Defendants).....	265

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

COUNT 4: NEGLIGENCE – FAILURE TO WARN (Against All Defendants)..... 268  
COUNT 5: NEGLIGENCE (Against All Defendants) ..... 271  
COUNT 6: NEGLIGENT UNDERTAKING (Against All Defendants)..... 278  
COUNT 7: FRAUDULENT CONCEALMENT AND MISREPRESENTATION  
(Against the Meta Defendants Only) ..... 280  
COUNT 8: NEGLIGENT CONCEALMENT AND MISREPRESENTATION (Against  
the Meta Defendants Only) ..... 284  
COUNT: 9 NEGLIGENCE PER SE (Against All Defendants) ..... 286  
COUNT 10: SEX AND AGE DISCRIMINATION (Against All Defendants)..... 289  
COUNT 11: WRONGFUL DEATH (Against All Defendants) ..... 290  
COUNT 12: SURVIVAL ACTION (Against All Defendants) ..... 291  
COUNT 13: LOSS OF CONSORTIUM AND SOCIETY (Against All Defendants)... 291  
VII. PRAYER FOR RELIEF ..... 292  
VIII. DEMAND FOR JURY TRIAL ..... 297

1 **I. INTRODUCTION**

2 1. American children are suffering an unprecedented mental health crisis fueled by  
3 Defendants’ addictive and dangerous social media products.

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

13 3. The defects in Defendants’ products vary by platform, but all exploit children and  
14 adolescents. They include but are not limited to an algorithmically-generated, endless feed to keep  
15 users scrolling in an induced “flow state;” “intermittent variable rewards” that manipulate dopamine  
16 delivery to intensify use; “trophies” to reward extreme usage; metrics and graphics to exploit social  
17 comparison; incessant notifications that encourage repetitive account checking by manufacturing  
18 insecurity; inadequate, essentially illusory age verification protocols; and deficient tools for parents  
19 that create the illusion of control.

20 4. The resulting ubiquity of Defendants’ products in the lives and palms of our kids,  
21 and the ensuing harm to them, is hard to overstate. Today, over a third of 13 to 17-year-old kids  
22 report using one of Defendants’ apps “almost constantly” and admit this is “too much.” Yet more  
23 than half of these kids report that they would struggle to cut back on their social media use. Instead  
24 of feeding coins into slot machines, kids are feeding Defendants’ products with an endless supply  
25 of attention, time, and data.

26 5. Defendants’ choices have generated extraordinary corporate profits—and yielded  
27 immense tragedy. Suicide rates for youth are up an alarming 57%. Emergency room visits for  
28 anxiety disorders are up 117%. In the decade leading up to 2020, there was a 40% increase in high

1 school students reporting persistent sadness and hopelessness, and a 36% increase in those who  
2 attempted to take their own lives. In 2019, one in five high school girls had made a suicide plan. In  
3 2021, one in three girls seriously considered attempting suicide. Children and their parents and  
4 guardians across the country have struggled to cope with the severe, lasting damage visited on their  
5 families by anxiety, depression, addiction, eating disorders, self-harm, suicidality, and the loss of  
6 outliving one’s child.

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

15           7.       The U.S. Surgeon General recently explained that children versus Big Tech is “just  
16 not a fair fight.”<sup>1</sup> “You have some of the best designers and product developers in the world who  
17 have designed these products to make sure people are maximizing the amount of time they spend  
18 on these platforms. And if we tell a child, use the force of your willpower to control how much time  
19 you’re spending, you’re pitting a child against the world’s greatest product designers.”

20           8.       Over the past year, a substantial number of personal injury actions have been filed in  
21 California courts alleging that Defendants defectively designed their platforms—in foreseeably  
22 unsafe ways and in dereliction of their basic duties of care—to induce harmful, unhealthy, and  
23 compulsive use by kids. Plaintiffs in these cases are the young people whose descent into the void  
24 of social media has led to serious and sometimes fatal harm, and their parents and guardians.

25

26 <sup>1</sup> Allison Gordon & Pamela Brown, *Surgeon General says 13 is ‘too early’ to join social media*,  
27 CNN (Jan. 29, 2023), [https://www.cnn.com/2023/01/29/health/surgeon-general-social-](https://www.cnn.com/2023/01/29/health/surgeon-general-social-media/index.html)  
28 [media/index.html](https://www.cnn.com/2023/01/29/health/surgeon-general-social-media/index.html). Exhibits and referenced materials are incorporated in this *Master Complaint* as  
if fully stated herein.

1 Defendants are the multibillion-dollar corporations who designed unsafe products that hopelessly  
2 outmatch parents’ struggle to keep their children healthy and safe.

3 9. Plaintiffs file this *Master Complaint (Personal Injury)* (“*Complaint*”) as an  
4 administrative device, to set forth the potential claims and facts that individual Plaintiffs may assert  
5 in this coordination proceeding against Defendants.<sup>2</sup> Unless otherwise indicated, Plaintiffs make  
6 allegations about themselves based on personal knowledge, and allegations about Defendants on  
7 information and belief generally gained through their attorneys’ investigations.

8 \* \* \*

9 10. Over the past decade, Defendants have relentlessly pursued a strategy of growth-at-  
10 all-costs, recklessly ignoring the impact of their products on children’s mental and physical health  
11 and well-being.<sup>3</sup> In a race to corner the “valuable but untapped” market of tween and teen users,  
12 each Defendant designed product features to promote repetitive, uncontrollable use by kids.<sup>4</sup>

13 11. Adolescents and children are central to the Defendants’ business models. These age  
14 groups are highly connected to the Internet, more likely to have social media accounts, and more  
15 likely to devote their downtime to social media usage. Additionally, youth influence the behavior  
16  
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19 <sup>2</sup> This *Complaint* does not necessarily include all claims or allegations that have been or will be  
20 asserted in each action filed in, or transferred to, this Court. Individual plaintiffs may adopt the  
21 allegations and claims in this *Complaint* through a separate *Short Form Complaint*. See Exhibit A  
22 (template *Master Short Form Complaint*). Individual plaintiffs may supplement or add allegations,  
23 claims, or defendants to their respective *Short Form Complaints*. This *Complaint* does not waive  
24 or dismiss any claims in any individual action. Nor does any Plaintiff relinquish any right they  
25 otherwise would have had, absent this *Complaint*, to amend (or move to amend) their *Short Form*  
26 *Complaints*.

27 <sup>3</sup> See, e.g., Haugen\_00000934 (admission by a Software Engineer at Meta, that “It’s not a secret  
28 that we’ve often resorted to aggressive tactics in the name of growth, and we’ve been pretty  
unapologetic about it.”).

<sup>4</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667>; see also Haugen\_00022339.



1 of their parents and younger siblings. As one Defendant put it, “los[ing] the teen foothold in the  
2 U.S.” would mean “los[ing] the pipeline” for growth.<sup>5</sup>

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

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

16 14. Defendants’ growth has come at the expense of its most vulnerable users: children  
17 around the world, including Plaintiffs, who Defendants cultivated and exploited. Plaintiffs are not  
18 merely the collateral damage of Defendants’ products. They are the direct victims of the intentional  
19 product design choices made by each Defendant. They are the intended targets of the harmful  
20 features that pushed them into self-destructive feedback loops.

21  
22  
23 \_\_\_\_\_  
24 <sup>5</sup> Sheera Frenkel et al., *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*,  
25 N.Y. Times (Oct. 26, 2021), available at  
<https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>.

26 <sup>6</sup> See Snap, Inc., 2022 Annual Report (Form 10-K) at 15 (Jan. 31, 2023) (“[W]e rely heavily on  
27 our ability to collect and disclose data[] and metrics to our advertisers so we can attract new  
28 advertisers and retain existing advertisers. Any restriction or inability, whether by law, regulation,  
policy, or other reason, to collect and disclose data and metrics which our advertisers find useful  
would impede our ability to attract and retain advertisers.”).

1           15.     As a direct result of Defendants’ successful promotion of their defective products,  
2 the rates of mental health issues among children have climbed steadily since 2010. By 2018, suicide  
3 was the second leading cause of death for youth.<sup>7</sup>

4           16.     The U.S. Surgeon General recently issued an advisory “to highlight the urgent need  
5 to address the nation’s youth mental health crisis.”<sup>8</sup> In a scathing rebuke of the assault on our  
6 children, the Surgeon General recognized the dangerous designs in Defendants’ products and  
7 Defendants’ abdication of responsibility for the resulting harms:

8                     In these digital public spaces, which are privately owned and tend to  
9                     be run for profit, there can be tension between what’s best for the  
10                    technology company and what’s best for the individual user or for  
11                    society. Business models are often built around maximizing user  
12                    engagement as opposed to safeguarding users’ health and ensuring  
13                    that users engage with one another in safe and healthy ways . . . .  
14                    **[T]echnology companies must step up and take responsibility for  
15                    creating a safe digital environment for children and youth.** Today,  
16                    most companies are not transparent about the impact of their products,  
17                    which prevents parents and young people from making informed  
18                    decisions and researchers from identifying problems and solutions.<sup>9</sup>

19           17.     The Surgeon General’s comments have since been echoed by President Biden  
20 himself. In both his 2022 and 2023 State of the Union Addresses, the President urged the nation to  
21 “hold social media platforms accountable for the national experiment they’re conducting on our  
22 children for profit.”<sup>10</sup> In a January 11, 2023 op-ed, President Biden amplified this point: “The risks

23 \_\_\_\_\_  
24 <sup>7</sup> CDC, *Deaths: Leading Causes for 2018*, 70(4) National Vital Statistics Reports at 10 (May 17,  
25 2021), <https://www.cdc.gov/nchs/data/nvsr/nvsr70/nvsr70-04-508.pdf>.

26 <sup>8</sup>Press Release, U.S. Dep’t Health & Hum. Servs., *U.S. Surgeon General Issues Advisory on Youth  
27 Mental Health Crisis Further Exposed by COVID-19 Pandemic* (Dec. 7, 2021),  
28 [https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-youth-  
mental-health-crisis-further-exposed-by-covid-19-pandemic.html](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).

<sup>9</sup> U.S. Surgeon General’s Advisory, *Protecting Youth Mental Health* (Dec. 7, 2021),  
<https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf>  
(emphasis in original).

<sup>10</sup> The White House, President Biden’s State of the Union Address (Mar. 1, 2022),  
<https://www.whitehouse.gov/state-of-the-union-2022/>; see also The White House, *President  
Biden’s State of the Union Address* (Feb. 7, 2023), [https://www.whitehouse.gov/state-of-the-  
union-2023/](https://www.whitehouse.gov/state-of-the-union-2023/).

1 Big Tech poses for ordinary Americans are clear. Big Tech companies collect huge amounts of data  
2 on the things we buy, on the websites we visit, on the places we go and, most troubling of all, on  
3 our children.”<sup>11</sup> The President observed that millions of children and adolescents struggle with  
4 “violence, trauma and mental health” as a result of Defendants’ conduct and products, and again  
5 stated that “[w]e must hold social-media companies accountable” for their role in this crisis.<sup>12</sup>

6 18. These statements by President Biden and the Surgeon General are in line with a  
7 substantial body of peer-reviewed scientific literature documenting the harmful impact that  
8 Defendants’ products have on our children, including the various injuries suffered by Plaintiffs. This  
9 body of research demonstrates that Defendants’ defectively designed products can cause the harms  
10 Plaintiffs suffer: addiction, compulsive use, anxiety, depression, eating disorders, body dysmorphia,  
11 self-harm, sexual exploitation, suicidal ideations, other serious diseases and injuries, and suicide  
12 itself. Overall rates of these disorders have increased greatly because of widespread consumption of  
13 Defendants’ products by children in this country and across the world.

14 19. Defendants knew or should have known about the risks of such addiction—which at  
15 least one Defendant euphemistically calls “problematic use.”<sup>13</sup> They could have changed their  
16 products to avoid the harm. They could have warned the public and Plaintiffs about the danger.  
17 Instead, Defendants placed growth first.

18  
19 \_\_\_\_\_  
20 <sup>11</sup> Joe Biden, *Republicans and Democrats, Unite Against Big Tech Abuses*, Wall St. J. (Jan. 11,  
21 2023), <https://www.wsj.com/articles/unite-against-big-tech-abuses-social-media-privacy-competition-antitrust-children-algorithm-11673439411>.

22 <sup>12</sup> Joe Biden, *Republicans and Democrats, Unite Against Big Tech Abuses*, Wall St. J. (Jan. 11,  
23 2023), <https://www.wsj.com/articles/unite-against-big-tech-abuses-social-media-privacy-competition-antitrust-children-algorithm-11673439411>.

24 <sup>13</sup> See Haugen\_00016373 at Haugen\_00016379 (internal Meta report from March 2020  
25 summarizing internal research on “problematic use”—when a user “experie[n]c[es] both of the  
26 following issues ‘very often’ or ‘all the time’: Lack of control or feelings of guilt over Facebook  
27 use. Negative impact in at least one of the following areas: productivity, sleep, parenting, or  
28 relationships.”); Haugen\_00016373 at Haugen\_00016412, Haugen\_00016490 (referring to  
“problematic use” as “Loss of Control Over Time Spent” or “LCOTS”); Haugen\_00016373 at  
Haugen\_00016379 (recognizing that “Problematic Use” is “sometimes referred to as ‘social media  
addiction’ externally”).

1           20.     Plaintiffs seek to recover damages from Defendants and hold them responsible for  
2 personal injuries resulting from their wrongful conduct. That conduct includes: (a) designing  
3 defective products that caused serious injuries to Plaintiffs; (b) failing to provide adequate warnings  
4 about serious and reasonably foreseeable health risks from use of the products; (c) failing to utilize  
5 reasonable care in, among other things, developing, designing, managing, operating, testing,  
6 producing, labeling, marketing, advertising, promoting, controlling, selling, supplying, and  
7 distributing their products; and (d) as to Meta, engaging in the deliberate concealment,  
8 misrepresentation, and obstruction of public awareness of serious health risks to users of its  
9 products.

10 **II.     THE PARTIES**

11           **A.     PLAINTIFFS**

12           21.     This *Complaint* is filed on behalf of children who suffered personal injuries—and, in  
13 cases of death, the personal representatives of their estates (“Plaintiffs”)—due to their use of  
14 Defendants’ products and, where applicable, their parents, guardians, spouses, children, siblings,  
15 and close family members, who suffered loss of society or consortium and other injuries as a  
16 consequence of the harms to Plaintiffs (“Consortium Plaintiffs”), who file a *Short Form Complaint*.  
17 By operation of an anticipated Court order, all allegations pled in this *Complaint* are deemed pled  
18 in any *Short Form Complaint* as to the Defendants identified therein.

19           22.     Plaintiffs have suffered various personal injuries because of their use of Defendants’  
20 products. Plaintiffs and Consortium Plaintiffs have been harmed as a direct and proximate result of  
21 Defendants’ wrongful conduct. These harms include pain, suffering, disability, impairment,  
22 disfigurement, death, an increased risk of injury and other serious illnesses, loss of enjoyment of  
23 life, loss of society, aggravation or activation of preexisting conditions, scarring, inconvenience,  
24 incurred costs for medical care and treatment, loss of wages and wage-earning capacity, and other  
25 economic and non-economic damages (specifically including any injuries set forth in a *Short Form*  
26 *Complaint*). These losses are often permanent and continuing in nature.

1           23.     Plaintiffs expressly disaffirm any contract they may have made with any of the  
2 Defendants, or that Defendants may claim they made with them, before reaching the age of majority,  
3 as they lacked capacity to contract.

4           24.     Plaintiffs also expressly disaffirm any contract they may have made with any of the  
5 Defendants, or that Defendants may claim they made with them, after reaching the age of majority,  
6 because Plaintiffs' continued use of Defendants' products was compulsive and due to addiction, not  
7 an affirmation of any contract.

8           **B.     DEFENDANTS**

9           25.     The defendants identified in this section are collectively referred to as "Defendants"  
10 throughout this *Complaint*.

11           **1.     Meta**

12           26.     Defendant Meta Platforms, Inc. ("Meta Platforms") is a Delaware corporation and  
13 multinational technology conglomerate. Its principal place of business is in Menlo Park, CA.

14           27.     Meta Platforms' subsidiaries include, but may not be limited to, the entities identified  
15 in this section, as well as a dozen others whose identity or involvement is presently unclear.

16           28.     Defendant Facebook Payments, Inc. ("Facebook 1") is a wholly owned subsidiary of  
17 Meta Platforms that was incorporated in Florida on December 10, 2010. Facebook 1 manages,  
18 secures, and processes payments made through Meta Platforms, among other activities. Its principal  
19 place of business is in Menlo Park, CA.

20           29.     Defendant Siculus, Inc. ("Siculus") is a wholly owned subsidiary of Meta Platforms  
21 that was incorporated in Delaware on October 19, 2011. Siculus constructs data facilities to support  
22 Meta Platforms' products. Its principal place of business is in Menlo Park, CA.

23           30.     Defendant Facebook Operations, LLC ("Facebook 2") is a wholly owned subsidiary  
24 of Meta Platforms that was incorporated in Delaware on January 8, 2012. Facebook 2 is likely a  
25 managing entity for Meta Platforms' other subsidiaries. Meta Platforms is the sole member of this  
26 LLC, whose principal place of business is in Menlo Park, CA.

27           31.     Defendant Instagram, LLC ("Instagram, LLC") launched an app called Instagram in  
28 October 2010. On or around April 7, 2012, Meta Platforms purchased Instagram, LLC for over one

1 billion dollars and reincorporated the company in Delaware. Meta Platforms is the sole member of  
2 this LLC, whose principal place of business is in Menlo Park, CA.

3 32. Meta Platforms, Instagram, Siculus, Facebook 1, and Facebook 2 are referred to  
4 jointly as “Meta.”

5 33. Meta owns, operates, controls, produces, designs, maintains, manages, develops,  
6 tests, labels, markets, advertises, promotes, supplies, and distributes digital products available  
7 through mobile- and web-based applications (“apps”), including Instagram and Facebook (together,  
8 “Meta products”); Messenger; and Messenger Kids. Meta’s apps and devices are widely distributed  
9 to consumers throughout the United States.

10 **2. Snap**

11 34. Defendant Snap Inc. (“Snap”) is a Delaware corporation. Its principal place of  
12 business is in Santa Monica, CA.

13 35. Snap owns, operates, controls, produces, designs, maintains, manages, develops,  
14 tests, labels, markets, advertises, promotes, supplies, and distributes the app Snapchat. Snapchat is  
15 widely available to consumers throughout the United States.

16 **3. ByteDance**

17 36. Defendant ByteDance Ltd. is a global company incorporated in the Cayman Islands.  
18 Its principal place of business is in Beijing, China. ByteDance Ltd. also maintains offices in the  
19 United States, Singapore, India, and the United Kingdom, among other locations.

20 37. ByteDance Ltd. wholly owns its subsidiary Defendant ByteDance Inc., a Delaware  
21 corporation whose principal place of business is in Mountain View, CA.

22 38. ByteDance Ltd.’s key Chinese subsidiary is Beijing Douyin Information Service  
23 Limited, f/k/a Beijing ByteDance Technology Co. Ltd. (“Beijing ByteDance”).<sup>14</sup> Beijing  
24 ByteDance owns, operates, and holds key licenses to Douyin, the Chinese version of TikTok. On or  
25

26 <sup>14</sup> See Sophie Webster, *ByteDance Changes Names of Subsidiaries to Douyin, Speculated to be*  
27 *Mulling an IPO*, Tech Times (May 8, 2022), available at  
28 <https://www.techtimes.com/articles/275188/20220508/bytedance-changes-names-subsidiaries-douyin-speculated-mulling-ipo.htm>.

1 around April 30, 2021, the Chinese government took a 1% stake in, and received one of three seats  
2 on the board of directors of, Beijing ByteDance.<sup>15</sup> Specifically, 1% of Beijing ByteDance is now  
3 owned by ZhongWen (Beijing) Technology, which in turn is owned by China Internet Investment  
4 Fund (China’s top Internet regulator and censor), China Media Group (China’s national broadcaster,  
5 controlled by the Chinese Communist Party’s propaganda department), and the Beijing municipal  
6 government’s investment arm.

7 39. ByteDance Ltd. wholly owns its subsidiary Defendant TikTok, Ltd., a Cayman  
8 Island corporation with its principal place of business in Shanghai, China.

9 40. TikTok, Ltd. wholly owns its subsidiary Defendant TikTok, LLC which is, and at all  
10 relevant times was, a Delaware limited liability company.

11 41. TikTok, LLC wholly owns its subsidiary Defendant TikTok, Inc. f/k/a Musical.ly,  
12 Inc. (“TikTok, Inc.”), a California corporation with its principal place of business in Culver City,  
13 CA.

14 42. Defendants TikTok, Ltd.; TikTok, LLC; TikTok, Inc.; ByteDance Ltd.; and  
15 ByteDance Inc. are referred to jointly as “ByteDance.”

16 43. ByteDance owns, operates, controls, produces, designs, maintains, manages,  
17 develops, tests, labels, markets, advertises, promotes, supplies, and distributes the app TikTok.  
18 TikTok is widely available to consumers throughout the United States.

19 **4. Google**

20 44. Google Inc. was incorporated in California in September 1998 and reincorporated in  
21 Delaware in August 2003. In or around 2017, Google Inc. converted to a Delaware limited liability  
22 company, Defendant Google, LLC (together with its predecessor-in-interest Google Inc.,  
23 “Google”). Google’s principal place of business is in Mountain View, CA.

24  
25

26 <sup>15</sup> See Juro Osawa & Shai Oster, *Beijing Tightens Grip on ByteDance by Quietly Taking Stake,*  
27 *China Board Seat*, The Information (Aug. 16, 2021), available at  
28 <https://www.theinformation.com/articles/beijing-tightens-grip-on-bytedance-by-quietly-taking-stake-china-board-seat?rc=ubpjcg>.

1           45.     Since 2006, Google has operated, done business as, and wholly owned as its  
2 subsidiary Defendant YouTube, LLC (“YouTube, LLC”). YouTube, LLC is a Delaware limited  
3 liability company with its principal place of business in San Bruno, CA. YouTube is widely  
4 available to consumers throughout the United States.<sup>16</sup>

5           46.     On October 2, 2015, Google reorganized and became a wholly owned subsidiary of  
6 a new holding company, Alphabet Inc., a Delaware corporation with its principal place of business  
7 in Mountain View, CA.

8           47.     Google, LLC and YouTube, LLC (together, “Google”) are alter egos of one another:  
9 together and in concert they own, operate, control, produce, design, maintain, manage, develop, test,  
10 label, market, advertise, promote, supply, and distribute the app YouTube.

11     **III.    JURISDICTION AND VENUE**

12           48.     This Court has jurisdiction over this entire action as this case is a civil action wherein  
13 the matter in controversy, exclusive of interest and costs, exceeds the jurisdictional minimum of the  
14 Court.

15           49.     This Court has personal jurisdiction over Defendants because they are incorporated  
16 in and have their principal places of business in California, and because they have contacts with  
17 California that are so continuous and systematic that they are essentially at home in this state. Meta,  
18 Google, and ByteDance, Inc. maintain their principal places of business within this State. Snap and  
19 TikTok Inc. maintain their headquarters in this State. All Defendants regularly conduct and solicit  
20 business in California, provide products and/or services by or to persons here, and derive substantial  
21 revenue from the same. All Defendants affirmatively and extensively engage with a significant  
22 percentage of this State’s residents through messages, notifications, recommendations, and other  
23 communications.

24  
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26  
27 <sup>16</sup> See, e.g., Alphabet Inc., *Form 10-Q*, Oct. 25, 2022, at 4 (defining Alphabet as “Alphabet Inc.  
28 and its subsidiaries.”), available at <https://www.sec.gov/Archives/edgar/data/1652044/000165204422000090/goog-20220930.htm>.



1           50.     There is no federal jurisdiction in this case. All claims are brought pursuant to  
2 California state law. There are no federal causes of action and Plaintiff expressly disclaim any  
3 federal causes of action.

4           51.     Venue is proper under the Judicial Council Coordination Proceedings (“JCCP”)  
5 order, which consolidated and assigned this litigation to Judge Carolyn B. Kuhl on January 5, 2023.

6 **IV.    FACTUAL ALLEGATIONS**

7       **A.    GENERAL FACTUAL ALLEGATIONS APPLICABLE TO ALL**  
8       **DEFENDANTS**

9           **1.    Defendants have targeted children as a core market.**

10          52.     Each Defendant has designed, engineered, marketed, and operated its products to  
11 maximize the number of children who download and use them compulsively. Children are more  
12 vulnerable users and have more free time on their hands than their adult counterparts. Because  
13 children use Defendants’ products more, they see more ads, and as a result generate more ad revenue  
14 for Defendants. Young users also generate a trove of data about their preferences, habits, and  
15 behaviors. That information is Defendants’ most valuable commodity. Defendants mine and  
16 commodify that data, including by selling to advertisers the ability to reach incredibly narrow  
17 tranches of the population, including children. Each Defendant placed its app(s) into the stream of  
18 commerce and generated revenues through the distribution of those apps at the expense of the  
19 consuming public and Plaintiffs.

20          53.     This exploitation of children, including each of the individual Plaintiffs in these  
21 actions, has become central to Defendants’ profitability. Like the cigarette industry a generation  
22 earlier, Defendants understand that a child user today becomes an adult user tomorrow.<sup>17</sup> Indeed,  
23 Defendants’ insatiable appetite for growth has created a need for younger and younger users.  
24 Defendants’ wrongfully acquired knowledge of their childhood userbase has allowed them to

25 <sup>17</sup> Haugen\_00006240 (“There are many lines of evidence for a substantial ‘ratchet’ effect in the  
26 growth of social apps: once you get a user on your app it’s hard to lose them. More precisely: the  
27 adoption of an app at a given point in time depends not just on the features of that app today, but is  
28 [sic] also depends on the *previous* adoption of that app.”); Haugen\_00006240 at  
Haugen\_00006241 (noting that, because of sunk costs and network effects, users will “stick with  
[an app] even if the relative quality declines.”).

1 develop product designs to target elementary school-age children, who are uniquely vulnerable. Like  
2 Joe Camel of old, Defendants’ recent attempts to capture pre-adolescent audiences include “kid  
3 versions” of apps that are “designed to fuel [kids’] interest in the grown-up version.”<sup>18</sup>

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

6 55. Children under age 13 are particularly vulnerable to being taken advantage of by  
7 unscrupulous website operators. As a June 1998 report by the FTC observed, “the immediacy and  
8 ease with which personal information can be collected from children online, combined with the  
9 limited capacity of children to understand fully the potentially serious safety and privacy  
10 implications of providing that information, have created deep concerns about current information  
11 practices involving children online.”<sup>19</sup> The same report observed that children under the age of 13  
12 “generally lack the developmental capacity and judgment to give meaningful consent to the release  
13 of personal information to a third party.”<sup>20</sup>

14 56. Contemporaneous testimony by the Chairman of the FTC observed that the Internet  
15 “make[s] it easy for children to disclose their personal information to the general public without  
16 their parents’ awareness or consent. Such public disclosures raise safety concerns.”<sup>21</sup> Further, “the  
17 practice of collecting personal identifying information directly from children without parental  
18

19 \_\_\_\_\_  
20 <sup>18</sup> Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022),  
<https://ifstudies.org/blog/is-tiktok-dangerous-for-teens->

21 <sup>19</sup> *Privacy Online: A Report to Congress*, Federal Trade Commission (1998) at 5.  
22 [https://www.ftc.gov/sites/default/files/documents/reports/privacy-online-report-congress/priv-](https://www.ftc.gov/sites/default/files/documents/reports/privacy-online-report-congress/priv-23a.pdf)  
23 [23a.pdf](https://www.ftc.gov/sites/default/files/documents/reports/privacy-online-report-congress/priv-23a.pdf).

24 <sup>20</sup> *Privacy Online: A Report to Congress*, Federal Trade Commission (1998) at 13.  
25 [https://www.ftc.gov/sites/default/files/documents/reports/privacy-online-report-congress/priv-](https://www.ftc.gov/sites/default/files/documents/reports/privacy-online-report-congress/priv-23a.pdf)  
[23a.pdf](https://www.ftc.gov/sites/default/files/documents/reports/privacy-online-report-congress/priv-23a.pdf).

26 <sup>21</sup> S. 2326, Children’s Online Privacy Protection Act of 1998: Hearing Before the U.S. Sen.  
27 Subcom. On Communications, Comm. On Commerce, Science, and Transportation, 105<sup>th</sup> Cong.  
11 (1998) (statement of Robert Pitofsky, Chairman, Federal Trade Commission),  
28 <http://www.techlawjournal.com/congress/privacy/80923ftc.htm>.

1 consent is clearly troubling, since it teaches children to reveal their personal information to strangers  
2 and circumvents parental control over their family’s information.”<sup>22</sup>

3 57. None of the Defendants conduct proper age verification or authentication. Instead,  
4 each Defendant leaves it to users to self-report their age. This unenforceable and facially inadequate  
5 system allows children under 13 to easily create accounts on Defendants’ apps.

6 58. This is particularly egregious for two reasons. *First*, Defendants have long been on  
7 notice of the problem. For instance, in May 2011, Consumer Reports reported the “troubling news”  
8 that 7.5 million children under 13 were on Facebook.<sup>23</sup> *Second*, given that Defendants have  
9 developed and utilized age-estimation algorithms for the purpose of selling user data and targeted  
10 advertisements, Defendants could readily use these algorithms to prevent children under 13 from  
11 accessing their products, but choose not to do so. Instead, they have turned a blind eye to collecting  
12 children’s data.

13 59. Defendants have done this because children are financially lucrative, particularly  
14 when they are addicted to Defendants’ apps.

15 **2. Children are uniquely susceptible to harm from Defendants’ apps.**

16 60. Young people are not only Defendants’ most lucrative market but are also those most  
17 vulnerable to harms resulting from Defendants’ products.

18 61. Social media addiction is a condition that has been recognized in scientific literature  
19 since 2008, when a pervasive upsurge in Facebook use prompted researchers to study the impact of  
20 overuse of social media.<sup>24</sup>

21 \_\_\_\_\_  
22 <sup>22</sup> S. 2326, Children’s Online Privacy Protection Act of 1998: Hearing Before the U.S. Sen.  
23 Subcom. On Communications, Comm. On Commerce, Science, and Transportation, 105<sup>th</sup> Cong.  
24 11 (1998) (statement of Robert Pitofsky, Chairman, Federal Trade Commission).  
25 <http://www.techlawjournal.com/congress/privacy/80923ftc.htm>.

26 <sup>23</sup> Emily Bazelon, *Why Facebook is After Your Kids*, N.Y. Times (Oct. 12, 2011),  
27 <https://www.nytimes.com/2011/10/16/magazine/why-facebook-is-after-your-kids.html>.

28 <sup>24</sup> Tim Davies & Pete Cranston, *Youth Work and Social Networking: Interim Report*, The National  
Youth Agency (May 2008).  
[https://www.researchgate.net/publication/233911484\\_Youth\\_Work\\_and\\_Social\\_Networking\\_Final\\_Research\\_Report](https://www.researchgate.net/publication/233911484_Youth_Work_and_Social_Networking_Final_Research_Report)

1           62.     The Bergen Social Media Addiction Scale is a widely accepted diagnostic tool used  
2 to assess social media addiction based on six core addiction elements: salience (preoccupation with  
3 the activity), mood modification (the behavior alters emotional state), tolerance (increasing activity  
4 is need for the same mood-altering effects), withdrawal (physical or psychological discomfort when  
5 the behavior is discontinued), conflict (ceasing other activities or social interaction to perform the  
6 behavior), and relapse (resuming the behavior after attempting to control or discontinue it).<sup>25</sup>

7           63.     The frontal lobes of the brain—particularly the prefrontal cortex—control higher-  
8 order cognitive functions. This region of the brain is central to planning and executive decision-  
9 making, including the evaluation of future consequences and the weighing of risk and reward. It  
10 also helps inhibit impulsive actions and “regulate emotional responses to social rewards.”<sup>26</sup>

11          64.     Children and adolescents are especially vulnerable to developing harmful behaviors  
12 because their prefrontal cortex is not fully developed.<sup>27</sup> Indeed, it is one of the last regions of the  
13 brain to mature.<sup>28,29</sup> In the images below, the blue color depicts brain development.<sup>30</sup>

14 \_\_\_\_\_  
15 <sup>25</sup> Cecilie Andreassen, et al., *The relationship between addictive use of social media and video*  
16 *games and symptoms of psychiatric disorders: A large-scale cross-sectional study*, 30(2) Psychol.  
of Addictive Behav., 252-262 (2016), <http://dx.doi.org/10.1037/adb0000160>.

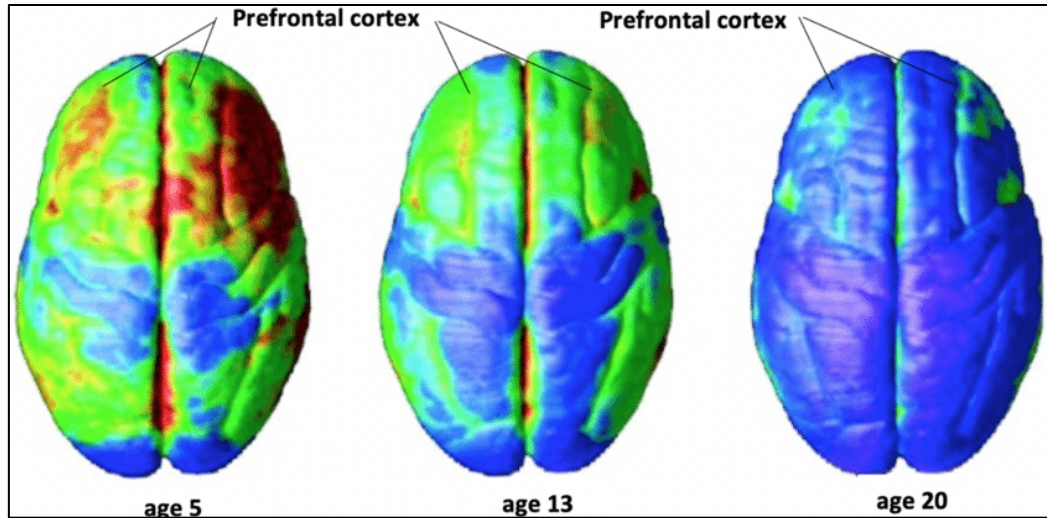
17 <sup>26</sup> Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass’n  
18 (Aug. 25, 2022), [https://www.apa.org/news/apa/2022/social-media-children-](https://www.apa.org/news/apa/2022/social-media-children-teens)  
[teenshttps://www.apa.org/news/apa/2022/social-media-children-teens](https://www.apa.org/news/apa/2022/social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

19 <sup>27</sup> Nino Gugushvili et al., *Facebook use intensity and depressive symptoms: A moderated*  
20 *mediation model of problematic Facebook use, age, neuroticism, and extraversion at 3*, BMC  
Psych. 10, 279 (Nov. 28, 2022), <https://doi.org/10.1186/s40359-022-00990-7>.

21 <sup>28</sup> Nino Gugushvili et al., *Facebook use intensity and depressive symptoms: a moderated*  
22 *mediation model of problematic Facebook use, age, neuroticism, and extraversion at 3*, BMC  
23 Psych. 10, 279 (Nov. 28, 2022), <https://doi.org/10.1186/s40359-022-00990-7>.

24 <sup>29</sup> Fulton Crews et al., *Adolescent cortical development: A critical period of vulnerability for*  
25 *addiction*, 86 Pharm., Biochem. and Behav. 189-199 (2007),  
<https://doi.org/10.1016/j.pbb.2006.12.001>

26 <sup>30</sup> Heiner Boettger, & Deborah Koeltesch, *The fear factor: Xenoglossophobia or how to*  
27 *overcome the anxiety of speaking foreign languages*, 4, Training Language and Culture, 43-55  
28 (June 2020), [https://www.researchgate.net/figure/Development-of-the-cortex-functions-The-](https://www.researchgate.net/figure/Development-of-the-cortex-functions-The-PFC_fig1_342501707)  
[PFC\\_fig1\\_342501707](https://www.researchgate.net/figure/Development-of-the-cortex-functions-The-PFC_fig1_342501707).



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

66. Social rewards deliver a rush of dopamine and oxytocin, known as the “happy hormones,” to the ventral striatum.<sup>31</sup> Dopamine is a neurotransmitter that is central to the brain’s reward system.<sup>32</sup> While the same hormones are released in youth and adults, there are two key differences. As Chief Science Officer Mitch Prinstein explained: “First, adults tend to have a fixed sense of self that relies less on feedback from peers. Second, adults have a more mature prefrontal cortex, an area that can help regulate emotional responses to social rewards.”<sup>33</sup>

67. Although the decision-making region of the brain is still not fully developed, regions involved in the reward pathway and closely tied to social media activity, like the ventral striatum,

<sup>31</sup> Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass’n (Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>.

<sup>32</sup> Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass’n (Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>.

<sup>33</sup> Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass’n (Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>.

1 begin to develop during adolescence.<sup>34</sup>

2 68. Between the ages of 10 and 12, dopamine receptors multiply in the ventral striatum,  
3 which makes social rewards—like compliments or laughter from a friend—more pleasant, and  
4 adolescents become more sensitive to attention from others.<sup>35</sup> Adolescents are at a stage where their  
5 personalities and identities are forming, much of which “is now reliant on social media.”<sup>36</sup>

6 69. During development, the brain is exposed to stimuli (e.g., Instagram) that becomes  
7 associated with a reward (e.g., likes) and a release of dopamine throughout the reward pathway. The  
8 feeling derived during the reward experience drives an individual to seek out the stimulus again,  
9 and the association between stimulus and reward grows stronger with repetitive activation.<sup>37</sup>  
10 Repeated spikes of dopamine over time may cause “neuroadaptation,” where the brain adapts for  
11 the increased dopamine levels caused by external stimuli by downregulating its production of and  
12 sensitivity to dopamine.<sup>38</sup> As a result, the individual develops tolerance, and the brain requires  
13 increasingly more of a stimulus to experience the same feeling of reward.

14 70. Imaging studies show that during a period of craving, there are also decreases in  
15 frontal cortex activity and executive functioning, leading to impaired “decision making, self-  
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19 <sup>34</sup> Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass’n  
(Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>.

20 <sup>35</sup> Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass’n  
21 (Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>.

22 <sup>36</sup> Betül Keles *et al.*, *A systematic review: the influence of social media on depression, anxiety and*  
*psychological distress in adolescents*, 25(1) *Int’l J. Adolescence & Youth* 79–93 (2019),  
23 <https://www.tandfonline.com/doi/full/10.1080/02673843.2019.1590851>).

24 <sup>37</sup> Bryon Adinoff, *Neurobiologic processes in drug reward and addiction*, 12(6) *Harv Rev*  
*Psychiatry* 305-320 (2004),  
25 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1920543/>  
26 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1920543/>.

27 <sup>38</sup> George Koob, & Nora Volkow. *Neurobiology of addiction: A neurocircuitry analysis*, 3(8)  
*Lancet Psychiatry* 760-773 (August 2016),  
28 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6135092/pdf/nihms-985499.pdf>.



1 regulation, inhibitory control, and working memory”.<sup>39</sup>

2 71. As New York University professor and social psychologist Adam Alter has  
3 explained, product features such as “Likes” give users a dopamine hit similar to drugs and alcohol:  
4 “The minute you take a drug, drink alcohol, smoke a cigarette . . . when you get a like on social  
5 media, all of those experiences produce dopamine, which is a chemical that’s associated with  
6 pleasure. When someone likes an Instagram post, or any content that you share, it’s a little bit like  
7 taking a drug. As far as your brain is concerned, it’s a very similar experience.”<sup>40</sup>

8 72. Notably, once the brain has learned to make this association, dopaminergic neurons  
9 “shift their . . . activation from the time of reward delivery to the time of presentation of [a] predictive  
10 cue.”<sup>41</sup> In other words, the anticipation of a reward can itself trigger a dopamine rush.

11 73. Conversely, if the stimulus is withheld, feelings of fatigue and anxiety or depression  
12 may be experienced, along with decreased sensitivity to the stimulant, which is associated with the  
13 withdrawal component of addiction.<sup>42</sup> Youth are more susceptible than adults to feelings of  
14

15 <sup>39</sup> George Koob, & Nora Volkow. *Neurobiology of addiction: A neurocircuitry analysis*, 3 (8)  
16 *Lancet Psychiatry* 760-773 (August 2016),  
17 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6135092/pdf/nihms-985499.pdf>.

18 <sup>40</sup> Eames Yates, *What happens to your brain when you get a like on Instagram*, Business Insider  
19 (Mar. 25, 2017), <https://www.businessinsider.com/what-happens-to-your-brain-like-instagram-dopamine-2017-3>; see also Sören Krach et al., *The rewarding nature of social interactions*, 4(22)  
20 *Frontiers in Behav. Neuro.* (May 28, 2010),  
21 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2889690/pdf/fnbeh-04-00022.pdf>; Julian  
22 Morgans, *The Secret Ways Social Media Is Built for Addiction*, Vice (May 17, 2017),  
23 <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>  
24 <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

25 <sup>41</sup> Luisa Speranza et al., *Dopamine: The Neuromodulator of Long-Term Synaptic Plasticity, Reward and Movement Control*, 10 *Cells* 735 (March 16, 2021),  
26 <https://pubmed.ncbi.nlm.nih.gov/33810328/>.

27 <sup>42</sup> Substance Abuse and Mental Health Services Administration (US); Office of the Surgeon  
28 General (US). *Facing Addiction in America: The Surgeon General’s Report on Alcohol, Drugs, and Health*. Washington (DC): US Department of Health and Human Services; 2016 Nov., Chapter 1, Introduction and Overview of the Report,  
<https://www.ncbi.nlm.nih.gov/books/NBK424860/?report=reader>

1 withdrawal when a dopamine hit wears off. Depending on the intensity, delivery, and timing of the  
2 stimulus, and the severity of its withdrawal, these feelings can include anxiety, dysphoria, and  
3 irritability.<sup>43</sup> Children and adolescents also are more likely to engage in compulsive behaviors to  
4 avoid these symptoms, due to their limited capacity for self-regulation, relative lack of impulse  
5 control, and struggle to delay gratification. Together, this means that children and adolescents are  
6 uniquely vulnerable and easy targets for a reward-based system that Defendants build into their  
7 social media products.

8         74. In a recent article, former Google CEO, Eric Schmidt, sums up research findings that  
9 “the greatest damage from social media seems to occur during the rapid brain rewiring of early  
10 puberty, around ages 11 to 13 for girls and slightly later for boys.”<sup>44</sup> He further indicates that “we  
11 must protect children from predation and addiction most vigorously during this time, and we must  
12 hold companies responsible for recruiting or even just admitting underage users...” As he points  
13 out, “[A]s long as children say that they are 13, the platforms let them open accounts, which is why  
14 so many children are heavy users of Instagram, Snapchat, and TikTok by age 10 or 11.”

15         75. Studies indicate that social rewards such as reputation, maternal and romantic love,  
16 positive emotional expressions and the stimuli of perceived beautiful faces are processed along the  
17 same neural reward network as non-social rewards and drug addiction.<sup>45</sup> Dopamine receptors were  
18 found reduced in the striatum (central component of the reward system) of the brain in individuals  
19  
20  
21

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22 <sup>43</sup> George Koob, and Nora Volkow. *Neurobiology of addiction: a neurocircuitry analysis*, 3 (8)  
23 *Lancet Psychiatry* 760-773 (August 2016),  
24 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6135092/pdf/nihms-985499.pdf>.

25 <sup>44</sup> Jonathan Haidt and Eric Schmidt, *AI is about to make social media (much) more toxic*, *The*  
26 *Atlantic* (May 5, 2023), <https://www.theatlantic.com/technology/archive/2023/05/generative-ai-social-media-integration-dangers-disinformation-addiction/673940/>

27 <sup>45</sup> Sören Krach, et al., *The rewarding nature of social interactions*, 4(22) *Frontiers in Behav.*  
28 *Neuro.*, (May 28, 2010), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2889690/pdf/fnbeh-04-00022.pdf>.



1 with Internet addiction.<sup>46</sup> Like other addicting products, Defendants’ products hook their users by  
2 disrupting their brains’ reward circuitry.

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

7 77. “Everyone innately responds to social approval,”<sup>47</sup> “[B]ut some demographics, in  
8 particular teenagers, are more vulnerable to it than others.”<sup>48</sup> Given their limited capacity to self-  
9 regulate and their vulnerability to peer pressure, children (including teens) are at greater risk of  
10 developing a mental disorder from use of Defendants’ products.<sup>49</sup>

11 78. As described further below, each Defendant deliberately designed, engineered, and  
12 implemented dangerous features in their apps that present social-reward and other stimuli in a  
13 manner that has caused Plaintiffs and many scores of others to compulsively seek out those stimuli,  
14 develop negative symptoms when they were withdrawn, and exhibit reduced impulse control and  
15 emotional regulation.

16 79. In short, children find it particularly difficult to exercise the self-control required to  
17 regulate their use of Defendants’ platforms, given the stimuli and rewards embedded in those apps,  
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21 <sup>46</sup> Sang Hee Kim, et al., *Reduced striatal dopamine D2 receptors in people with Internet  
addiction*, 22 NeuroReport 407-11 (June 11, 2011), <https://pubmed.ncbi.nlm.nih.gov/21499141/>.

22 <sup>47</sup> Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016),  
23 [https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-  
1104237.html](https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html).

24 <sup>48</sup> Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016),  
25 [https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-  
1104237.html](https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html).

26 <sup>49</sup> Betul Keles et al., *A systematic review: the influence of social media on depression, anxiety and  
27 psychological distress in adolescents*, 25(1) Int’l J. Adolescence & Youth 79–93 (2019),  
28 <https://www.tandfonline.com/doi/full/10.1080/02673843.2019.1590851>.

1 and as a foreseeable consequence tend to engage in addictive and compulsive use.<sup>50</sup>

2 **3. Defendants designed their apps to attract and addict youth.**

3 80. Instagram, Facebook, TikTok, Snap, and YouTube employ many similar defective  
4 and dangerous product features that are engineered to induce more use by young people—creating  
5 an unreasonable risk of compulsive use and addiction.<sup>51</sup> For instance, all five apps harvest user data  
6 and use this information to generate and push algorithmically tailored “feeds” of photos and videos.  
7 And all five include methods through which approval can be expressed and received, such as likes,  
8 hearts, comments, shares, or reposts. This section explains the psychological and social mechanisms  
9 exploited by these and other product defects.

10 81. *First*, Defendants’ apps are designed and engineered to methodically, but  
11 unpredictably, space out dopamine-triggering rewards with dopamine gaps. The unpredictability is  
12 key because, paradoxically, intermittent variable rewards (or “IVR”) create stronger associations  
13 (conditioned changes in the neural pathway) than fixed rewards. Products that use this technique are  
14 highly addictive or habit forming.

15 82. IVR is based on insights from behavioral science dating back to research in the 1950s  
16 by Harvard psychologist B. F. Skinner. Skinner found that laboratory mice respond most  
17 voraciously to unpredictable rewards. In one famous experiment, mice that pushed a lever received  
18 a variable reward (a small treat, a large treat, or no treat at all). Compared with mice who received  
19 the same treat every time, the mice who received only occasional rewards were more likely to exhibit  
20 addictive behaviors such as pressing the lever compulsively. IVR works by spacing out dopamine

23 <sup>50</sup> Fulton Crews et al., *Adolescent cortical development: A critical period of vulnerability for*  
24 *addiction*, 86 *Pharmacology, Biochemistry and Behavior* 189-199 (Feb. 2007),  
<https://www.sciencedirect.com/science/article/pii/S009130570600400X>.

25 <sup>51</sup> See Kevin Hurler, *For Sites Like Instagram and Twitter, Imitation Is the Only Form of Flattery*,  
26 *Gizmodo* (Aug. 16, 2022), [https://gizmodo.com/instagram-tiktok-snapchat-facebook-meta-](https://gizmodo.com/instagram-tiktok-snapchat-facebook-meta-1849395419)  
27 [1849395419](https://gizmodo.com/instagram-tiktok-snapchat-facebook-meta-1849395419) (“Over the last decade, some of the most popular social media apps have blatantly  
28 [ripped off features from some of the other most popular social media apps, in a tech version of](https://gizmodo.com/instagram-tiktok-snapchat-facebook-meta-1849395419)  
[Capture the Flag where the only losers are the users who are forced to persist through this cat-and-](https://gizmodo.com/instagram-tiktok-snapchat-facebook-meta-1849395419)  
[mouse game.”\).](https://gizmodo.com/instagram-tiktok-snapchat-facebook-meta-1849395419)

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

3 83. Slot machines are a pertinent example of how IVR works in an addictive product to  
4 keep users coming back.<sup>52</sup> Users pull a lever to win a prize and with each pull, the user may or may  
5 not win a prize (*i.e.*, an intermittent reward that varies in value).

6 84. The IVR aspect of slot machines is limited by the fact that they deliver rewards in a  
7 randomized manner, irrespective of the person pulling the lever. By contrast, Defendants’ apps are  
8 designed to purposely withhold and release rewards on a schedule its algorithms have determined  
9 is optimal to heighten a specific user’s craving and keep them using the product. Defendants  
10 incorporate IVR into the design and operations of their respective products in various ways by  
11 “link[ing] a user’s action (like pulling a lever) with a variable reward.”<sup>53</sup> For example, when “we  
12 swipe down our finger to scroll the Instagram feed, we’re playing a slot machine to see what photo  
13 comes next.”<sup>54</sup> Meta also delays the time it takes to load the feed. “This is because without that  
14 three-second delay, Instagram wouldn’t feel variable.”<sup>55</sup> Without that delay, there would be no time  
15 for users’ anticipation and craving to build. In slot machine terms, there would be “no sense of *will*

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19 <sup>52</sup> See, e.g., Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17,  
20 2017), <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

21 <sup>53</sup> Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016),  
22 <https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

23 <sup>54</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>.

25 <sup>55</sup> Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017),  
26 <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

27 <sup>56</sup> Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017),  
28 <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

1 *I win?* because you'd know instantly. So the delay isn't the app loading. It's the cogs spinning on  
2 the slot machine."<sup>56</sup>

3 85. Former Google CEO and chairman of Alphabet, Eric Schmidt, described similar  
4 psychology as follows: "think of a slot machine, a contraption that employs dozens of psychological  
5 tricks to maximize its addictive power. Next, imagine...if they could create a new slot machine for  
6 each person, tailored in its visuals, soundtrack, and payout matrices to that person's interests and  
7 weaknesses. That's essentially what social media *already* does, using algorithms and AI..."<sup>57</sup>

8 86. As further described below, each of Defendants' products exploits this physiological  
9 reaction among its users, typically using "likes," "hearts," or other forms of approval that serve as  
10 the reward and are purposefully delivered in a way to create stronger associations and maximize  
11 addiction. TikTok may delay a video it knows a user will like until the moment before it anticipates  
12 the user would otherwise log out. Instagram's notification algorithm can determine that a particular  
13 user's engagement will be maximized if the app withholds "Likes" on their posts and then later  
14 delivers them in a large burst of notifications.

15 87. Defendants' use of IVR is particularly effective on and dangerous for adolescents,  
16 given the incomplete aspects of their brain maturation described above—including lack of impulse  
17 control and immature executive functions.

18 88. *Second*, there are multiple types of dopamine neurons that are connected with distinct  
19 brain networks and have distinct roles in motivational control. Apart from the dopamine reward loop  
20 triggered by positive feedback, other dopamine neurons are impacted by salient but non-rewarding  
21 stimuli and even painful-aversive stimuli.<sup>58</sup> Defendants' apps capitalize on this by algorithmically  
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25 <sup>57</sup> Jonathan Haidt and Eric Schmidt, *AI is about to make social media (much) more toxic*, The  
26 Atlantic (May 5, 2023), <https://www.theatlantic.com/technology/archive/2023/05/generative-ai-social-media-integration-dangers-disinformation-addiction/673940/>

27 <sup>58</sup> J.P.H. Verharen, Yichen Zhu, and Stephan Lammelet al., *Aversion hot spots in the dopamine*  
28 *system*, 64 *Neurobiology* 46-52 (Oct. 2020) <https://doi.org/10.1016/j.conb.2020.02.002>.

1 ranking photos and videos that “engage” users because they present a dopamine pay-off, including  
2 novel, aversive, and alarming images.

3 89. *Third*, dangerous and defective features in Defendants’ apps manipulate young users  
4 through their exploitation of “reciprocity”—the psychological phenomenon by which people  
5 respond to positive or hostile actions in kind. Reciprocity means that people respond in a friendly  
6 manner to friendly actions, and with negative retaliation to hostile actions.<sup>59</sup> Phillip Kunz best  
7 illustrated the powerful effect of reciprocity through an experiment using holiday cards. Cards were  
8 sent to a group of complete strangers as though from Kunz and his family.<sup>60</sup> People whom he had  
9 never met or communicated with before reciprocated, flooding him with holiday cards in return,  
10 some even including hand-written notes and pictures of their families.<sup>61</sup> Most of the responses did  
11 not even ask Mr. Kunz who he was—they simply responded to his initial gesture with a reciprocal  
12 action.<sup>62</sup>

13 90. Products like Instagram and Snapchat exploit reciprocity by, for example,  
14 automatically telling a sender when their message is seen, instead of letting the recipient avoid  
15 disclosing whether it was viewed. Consequently, the recipient feels more obligated to respond  
16 immediately, keeping users on the product.<sup>63</sup> Similarly, alerts and notifications of delivered  
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19 <sup>59</sup> Ernst Fehr & Simon Gächter, *Fairness and Retaliation: The Economics of Reciprocity*, 14(3) J.  
20 Econ. Persps. 159–81 (March 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)

21 <sup>60</sup> Phillip R. Kunz & Michael Woolcott, *Season’s Greetings: From my status to yours*, 5(3) Soc.  
22 Sci. Rsch. 269–78 (Sept. 1976), [https://doi.org/10.1016/0049-089X\(76\)90003-X](https://doi.org/10.1016/0049-089X(76)90003-X).

23 <sup>61</sup> Phillip R. Kunz & Michael Woolcott, *Season’s Greetings: From my status to yours*, 5(3) Soc.  
24 Sci. Rsch. 269–78 (Sept. 1976), [https://doi.org/10.1016/0049-089X\(76\)90003-X](https://doi.org/10.1016/0049-089X(76)90003-X).

25 <sup>62</sup> Phillip R. Kunz & Michael Woolcott, *Season’s Greetings: From my status to yours*, 5(3) Soc.  
26 Sci. Rsch. 269–78 (Sept. 1976), [https://doi.org/10.1016/0049-089X\(76\)90003-X](https://doi.org/10.1016/0049-089X(76)90003-X).

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

1 messages or comments compel the recipient to return to the product to make an appropriate  
2 response.

3 91. *Fourth*, Defendants’ apps addict young users by preying on their already-heightened  
4 need for social comparison and interpersonal feedback-seeking.<sup>64</sup> Because of their relatively  
5 undeveloped prefrontal cortex, young people are already predisposed to status anxieties, beauty  
6 comparisons, and a desire for social validation.<sup>65</sup> Defendants’ apps encourage repetitive usage by  
7 dramatically amplifying those insecurities.

8 92. Mitch Prinstein, Chief Science Officer for the American Psychology Association,  
9 has explained that online and real-world interactions are fundamentally different.<sup>66</sup> For example, in  
10 the real world, no public ledger tallies the number of consecutive days friends speak. Similarly,  
11 “[a]fter you walk away from a regular conversation, you don’t know if the other person liked it, or  
12 if anyone else liked it.”<sup>67</sup> By contrast, a product defect like the “Snap Streak” creates exactly such  
13 artificial forms of feedback.<sup>68</sup> On Defendants’ apps, friends and even complete strangers can deliver  
14 (or withhold) dopamine-laced likes, comments, views, or follows.<sup>69</sup>

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16 <sup>64</sup> Jacqueline Nesi & Mitchell J Prinstein, *Using Social Media for Social Comparison and*  
17 *Feedback-Seeking: Gender and Popularity Moderate Associations with Depressive Symptoms*, 43  
18 *J. Abnormal Child Psych.* 1427–38 (Nov. 2015), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985443/>.

19 <sup>65</sup> Susan Harter, *The Construction of the Self: Developmental and Sociocultural Foundations*  
20 (Guilford Press, 2d ed., 2012) (explaining how, as adolescents move toward developing cohesive  
21 self-identities, they typically engage in greater levels of social comparison and interpersonal  
22 feedback-seeking).

23 <sup>66</sup> Zara Abrams, *Why young brains are especially vulnerable to social media*, *Am. Psych. Ass’n*  
24 (Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>.

25 <sup>67</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 <sup>68</sup> A “Snap Streak” is designed to measure a user’s Snapchat activity with another user. Two users  
28 achieve a “Snap Streak” when they exchange at least one Snap in three consecutive 24-hour  
periods. When successively longer “Streaks” are achieved, users are rewarded with varying tiers  
of emojis. *See infra* p.165.

<sup>69</sup> Zara Abrams, *Why young brains are especially vulnerable to social media*, *Am. Psych. Ass’n*

1           93. The “Like” feature on Facebook, Instagram, TikTok, and YouTube, or other  
2 comparable features common to Defendants’ products, have an especially powerful effect on  
3 teenagers and can neurologically alter their perception of online posts. Researchers at UCLA used  
4 magnetic resonance imaging to study the brains of teenage girls as they used Instagram. They found  
5 that girls’ perception of a photo changed depending on the number of likes it had generated.<sup>70</sup> That  
6 an image was highly liked—regardless of its content—instinctively caused the girls to prefer it. As  
7 the researchers put it, teens react to perceived “endorsements,” regardless of whether they knew the  
8 source.<sup>71</sup>

9           94. The design of Defendants’ apps also encourages unhealthy, negative social  
10 comparisons, which in turn cause body image issues and related mental and physical disorders.  
11 Given adolescents’ naturally vacillating levels of self-esteem, they are already predisposed to  
12 comparing “upward” to celebrities, influencers, and peers they perceive as more popular.<sup>72</sup>  
13 Defendants’ apps turbocharge this phenomenon. On Defendants’ apps, users disproportionately post

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15 \_\_\_\_\_  
(Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>

16 <sup>70</sup> Lauren E. Sherman et al., *The Power of the Like in Adolescence: Effects of Peer Influence on*  
17 *Neural and Behavioral Responses to Social Media*, 27(7) *Psychol Sci.* 1027-35 (May 31, 2016),  
18 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/>. **Error! Hyperlink reference not valid.**

19 <sup>71</sup> Lauren E. Sherman et al., *The Power of the Like in Adolescence: Effects of Peer Influence on*  
20 *Neural and Behavioral Responses to Social Media*, 27(7) *Psychol Sci.* 1027-35 (May 31, 2016),  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/>.

21 <sup>72</sup> Jacqueline Nesi & Mitchell J Prinstein, *Using Social Media for Social Comparison and*  
22 *Feedback-Seeking: Gender and Popularity Moderate Associations with Depressive Symptoms*, 43  
23 *J. Abnormal Child Psych.* 1427–38 (Nov. 2015),  
24 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985443/>. “Upward comparison occurs when  
25 people compare themselves to someone they perceive to be superior[ ], whereas a downward  
26 comparison is defined by making a comparison with someone perceived to be inferior[.]”; Jin-  
27 Liang Wang, et al., *The Mediating Roles of Upward Social Comparison and Self-esteem and the*  
28 *Moderating Role of Social Comparison Orientation in the Association between Social Networking*  
*Site Usage and Subjective Well-Being*, *Front. Psychol.* (May 2017),  
[https://www.frontiersin.org/articles/10.3389/fpsyg.2017.00771/full#:~:text=Social%20comparison%20can%20be%20upward,inferior%20\(Wills%2C%201981\)https://www.frontiersin.org/articles/10.3389/fpsyg.2017.00771/full#:~:text=Social%20comparison%20can%20be%20upward,inferior%20\(Wills%2C%201981\).](https://www.frontiersin.org/articles/10.3389/fpsyg.2017.00771/full#:~:text=Social%20comparison%20can%20be%20upward,inferior%20(Wills%2C%201981)https://www.frontiersin.org/articles/10.3389/fpsyg.2017.00771/full#:~:text=Social%20comparison%20can%20be%20upward,inferior%20(Wills%2C%201981).)



1 “idealized” content,<sup>73</sup> misrepresenting their lives. That is made worse by appearance-altering filters  
2 built into Defendants’ apps, which underscore conventional (and often racially biased) standards of  
3 beauty, by allowing users to remove blemishes, make bodies and faces appear thinner, and lighten  
4 skin-tone. Defendants’ apps provide a continuous stream, creating “an online social world that is  
5 fundamentally different than its offline counterpart.”<sup>74</sup>

6 95. *Fifth*, Defendants’ respective product features work in combination to create and  
7 maintain a user’s “flow-like state”: a hyper-focused, hypnotic state, where bodily movements are  
8 reflexive and the user is totally immersed in smoothly rotating through aspects of the social media  
9 product.<sup>75</sup> This experience of “flow”, as psychologists describe it, “fully immerse[s]” users, distorts  
10 their perception of time, and is associated with excessive use of social media sites.<sup>76</sup>

11 96. As discussed in more detail below, defective features like the ones just described can  
12 cause or contribute to (and, with respect to Plaintiffs, have caused and contributed to) the following  
13 injuries in young people: eating and feeding disorders; depressive disorders; anxiety disorders; sleep  
14 disorders; trauma- and stressor-related disorders; obsessive-compulsive and related disorders;  
15 disruptive, impulse-control, and conduct disorders; suicidal ideation; self-harm; and suicide.<sup>77</sup>

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17 <sup>73</sup> Jacqueline Nesi & Mitchell J Prinstein, *Using Social Media for Social Comparison and*  
18 *Feedback-Seeking: Gender and Popularity Moderate Associations with Depressive Symptoms*, 43  
19 *J. Abnormal Child Psych.* 1427–38 (Nov. 2015),  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985443/>; 1427–38 (2015).

20 <sup>74</sup> Jacqueline Nesi & Mitchell J Prinstein, *Using Social Media for Social Comparison and*  
21 *Feedback-Seeking: Gender and Popularity Moderate Associations with Depressive Symptoms*, 43  
22 *J. Abnormal Child Psych.* 1427–38 (Nov. 2015),  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985443/>; 1427–38 (2015).

23 <sup>75</sup> See e.g., *What Makes TikTok so Addictive?: An Analysis of the Mechanisms Underlying the*  
24 *World’s Latest Social Media Craze*, Brown Undergraduate J. of Pub. Health (Dec. 13,  
25 2021), <https://sites.brown.edu/publichealthjournal/2021/12/13/tiktok/> (describing how IVR and  
infinite scrolling may induce a flow state in users).

26 <sup>76</sup> Nino Gugushvili et al., *Facebook use intensity and depressive symptoms: a moderated*  
27 *mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, *BMC*  
*Psych.* 10, 279 (Nov. 28, 2022), <https://doi.org/10.1186/s40359-022-00990-7>.

28 <sup>77</sup> E.g., Nino Gugushvili et al., *Facebook use intensity and depressive symptoms: a moderated*



1                   **4.       Millions of kids use Defendants’ products compulsively.**

2           97.       Defendants have been staggeringly successful in their efforts to attract young users  
3 to their apps. In 2021, 32% of 7- to 9-year-olds,<sup>78</sup> 49% of 10- to 12-year-olds,<sup>79</sup> and 90% of 13- to  
4 17-year-olds in the United States used social media.<sup>80</sup> A majority of U.S. teens use Instagram,  
5 TikTok, Snapchat, and/or YouTube. Thirty-two percent say they “wouldn’t want to live without”  
6 YouTube, while 20% said the same about Snapchat, and 13% said the same about both TikTok and  
7 Instagram.<sup>81</sup>

8           98.       U.S. teenagers who use Defendants’ products are likely to use them every day. Sixty-  
9 two percent of U.S. children ages 13-18 use social media daily.<sup>82</sup> And daily use often means repeated  
10 checking throughout the day. About one-in-five U.S. teens visit or use YouTube “almost  
11

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12                   *mediation model of problematic Facebook use, age, neuroticism, and extraversion at 3*, BMC  
13 Psych. 10, 279 (Nov. 28, 2022), <https://doi.org/10.1186/s40359-022-00990-7> (collecting sources).

14 <sup>78</sup> *Sharing Too Soon? Children and Social Media Apps*, C.S. Mott Child’s Hosp. Univ. Mich.  
15 Health (Oct. 18, 2021),  
[https://mottpoll.org/sites/default/files/documents/101821\\_SocialMedia.pdf](https://mottpoll.org/sites/default/files/documents/101821_SocialMedia.pdf).

16 <sup>79</sup> *Sharing Too Soon? Children and Social Media Apps*, C.S. Mott Child’s Hosp. Univ. Mich.  
17 Health (Oct. 18, 2021),  
[https://mottpoll.org/sites/default/files/documents/101821\\_SocialMedia.pdf](https://mottpoll.org/sites/default/files/documents/101821_SocialMedia.pdf).

18 <sup>80</sup> *Social Media and Teens*, Am. Acad. Child & Adolescent Psychiatry (Mar. 2018),  
19 [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)  
20 [Media-and-Teens-100.aspx](https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Social-Media-and-Teens-100.aspx); see also Victoria Rideout et al., *The Common Sense Census: Media*  
21 *Use by Tweens and Teens, 2021* at 5, Common Sense Media (2022),  
22 [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://www.commonsensemedia.org/sites/default/files/research/report/8-](https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf)

23 <sup>81</sup> Victoria Rideout et al., *The Common Sense Census: Media use by tweens and teens, 2021* at 31,  
24 Common Sense Media (2022), .  
25 [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).

26 <sup>82</sup> Victoria Rideout et al., *The Common Sense Census: Media use by tweens and teens, 2021* at 31,  
27 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).

1 constantly,” while about one-in-six report comparable usage of Instagram.<sup>83</sup> Nearly half of U.S.  
2 teens use TikTok at least “several times a day.”<sup>84</sup> In one study, U.S. teenage users reported checking  
3 Snapchat thirty times a day on average.<sup>85</sup>

4 99. Teenagers know they are addicted to Defendants’ products: 36% admit they spend  
5 too much time on social media.<sup>86</sup> Yet they can’t stop. Of the teens who use at least one social media  
6 product “almost constantly,” 71% say quitting would be hard. Nearly one-third of this population—  
7 and nearly one-in-five of *all* teens—say quitting would be “very hard.”<sup>87</sup>

8 100. Notably, the more teens use Defendants’ apps, the harder it is to quit. Teens who say  
9 they spend too much time on social media are almost twice as likely to say that giving up social  
10 media would be hard, compared to teens who see their social media usage as about right.<sup>88</sup>

11 101. Despite using social media frequently, most young people do not particularly enjoy  
12 it. In 2021, only 27% of boys and 42% of girls ages 8-18 reported liking social media “a lot.”<sup>89</sup>

13  
14 <sup>83</sup> Emily Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022),  
15 <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

16 <sup>84</sup> Emily Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022),  
17 <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

18 <sup>85</sup> Erinn Murphy et al., *Taking Stock with Teens, Fall 2021* at 13, Piper Sandler (2021),  
19 <https://tinyurl.com/89ct4p88>; see also Emily Vogels et al., *Teens, Social Media and Technology*  
20 *2022*, Pew Rsch. Ctr. (Aug. 10, 2022), [https://www.pewresearch.org/internet/2022/08/10/teens-](https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/)  
21 [social-media-and-technology-2022/](https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/).

22 <sup>86</sup> Emily Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022),  
23 <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

24 <sup>87</sup> Emily Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022),  
25 <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

26 <sup>88</sup> Emily Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022),  
27 <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

28 <sup>89</sup> [https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-](https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf)  
[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) Victoria Rideout et al., *Common Sense Census: Media use by tweens and*  
*teens, 2021* at 34, Common Sense Media (2022), **Error! Hyperlink reference not**  
**valid.** [https://www.common sense media.org/sites/default/files/research/report/8-18-census-](https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf)  
[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).

1 Moreover, one survey found that young people think social media is the main reason youth mental  
2 health is getting worse.<sup>90</sup> About twice as many of the surveyed youth believed that social media is  
3 the main reason for declining mental health than the next likely cause, and over *seven times* more  
4 believed it to be the main cause rather than drugs and alcohol.<sup>91</sup>

5 **5. Defendants’ apps have created a youth mental health crisis.**

6 102. Over a decade of scientific and medical studies demonstrate that dangerous features  
7 engineered into Defendants’ platforms—particularly when used multiple hours a day—can have a  
8 “detrimental effect on the psychological health of [their] users,” including compulsive use,  
9 addiction, body dissatisfaction, anxiety, depression, and self-harming behaviors such as eating  
10 disorders.<sup>92</sup>

11 103. Addiction and compulsive use of Defendants’ products can entail a variety of  
12 behavioral problems including but not limited to: (1) a lessening of control, (2) persistent,  
13 compulsive seeking out of access to the product, (3) using the product more, and for longer, than  
14 intended, (4) trying to cut down on use but being unable to do so, (5) experiencing intense cravings  
15 or urges to use, (6) tolerance (needing more of the product to achieve the same desired effect), (7)  
16 developing withdrawal symptoms when not using the product, or when the product is taken away,  
17 (8) neglecting responsibilities at home, work, or school because of the intensity of usage, (9)  
18 continuing to use the product even when doing so interferes and causes problems with important  
19

20 <sup>90</sup> *Headspace National Youth Mental Health Survey 2018*, National Youth Mental Health  
21 Foundation (2018), [https://headspace.org.au/assets/headspace-National-Youth-Mental-Health-  
22 Survey-2018.pdf](https://headspace.org.au/assets/headspace-National-Youth-Mental-Health-Survey-2018.pdf).

23 <sup>91</sup> *Headspace National Youth Mental Health Survey 2018*, National Youth Mental Health  
24 Foundation (2018), [https://headspace.org.au/assets/headspace-National-Youth-Mental-Health-  
Survey-2018.pdf](https://headspace.org.au/assets/headspace-National-Youth-Mental-Health-Survey-2018.pdf) (surveying more than 4,000 Australians ages 12-25).

25 <sup>92</sup> *See, e.g.,* Fazida Karim *et al.*, *Social Media Use and Its Connection to Mental Health: A*  
26 *Systemic Review*, *Cureus* Volume 12(6) (June 15, 2020),  
27 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7364393/>; Alexandra R. Lonergan *et al.*, *Protect*  
28 *me from my selfie: Examining the association between photo-based social media behaviors and*  
*self-reported eating disorders in adolescence*, *Int. J. of Eating Disorders* 756 (Apr. 7, 2020),  
<https://onlinelibrary.wiley.com/doi/epdf/10.1002/eat.23256>.

1 family and social relationships, (10) giving up important or desirable social and recreational  
2 activities due to use, and (11) continuing to use despite the product causing significant harm to the  
3 user’s physical and mental health.

4 104. Many of these injuries can be long-lasting, if not lifelong. For example, the long-  
5 term effects of eating disorders can include: (1) dermatological effects to the nails and hair;  
6 (2) gastrointestinal illnesses, such as gastroparesis or hypomotility of the colon; (3) impacts to the  
7 endocrine system, such as glycolic or metabolic conditions, bone loss, and hormonal conditions; (4)  
8 nervous system effects, such as gray matter brain loss or atrophy; (5) skeletal system effects, such  
9 as bone loss; (6) cardiovascular effects, such as structural heart damage, mitral valve prolapse, or  
10 fluid around the heart; and (7) fertility issues.<sup>93</sup>

11 105. Each Defendant has long been aware of this research, but chose to ignore or brush it  
12 off.<sup>94</sup> For example, in 2018, Meta employees mocked it as “BS . . . pseudo science,” [sic] and “a  
13 bunch of people trying to get air time.”<sup>95</sup> Yet, as discussed at length below, Defendants conducted  
14 some of the research themselves—and then hid their unfavorable findings from the public.<sup>96</sup>

15 \_\_\_\_\_  
16 <sup>93</sup> See, e.g., Anorexia Nervosa, Cleveland Clinic  
17 <https://my.clevelandclinic.org/health/diseases/9794-anorexia-nervosa#outlook--prognosis>; Bulimia  
18 Nervosa; Cleveland Clinic [https://my.clevelandclinic.org/health/diseases/9795-bulimia-  
nervosa#symptoms-and-causes](https://my.clevelandclinic.org/health/diseases/9795-bulimia-nervosa#symptoms-and-causes).

19 <sup>94</sup> In August 2019, a social psychologist, and leading expert on the effect that technology products  
20 have on the mental health of their users, wrote to Mr. Zuckerberg ahead of a meeting to note that a  
21 new study “point[ed] heavily to a connection, not just from correlational studies but from true  
22 experiments, which strongly indicate[d] causation, not just correlation” between Meta’s products  
23 and harms to users’ wellbeing. META3047MDL-003-00089107 at META3047MDL-003-  
00089108. In some cases, Meta was not only aware of research connecting its products to  
detrimental effects but actively sought to undermine it. See META3047MDL-003-00082165 at  
META3047MDL-003-00082165 (discussing methods to undermine research on addiction to  
apps).

24 <sup>95</sup> META3047MDL-003-00082165.

25 <sup>96</sup> See, e.g., Haugen\_00016373 at Haugen\_00016381 (“The best external research indicates that  
26 Facebook’s impact on people’s well-being is negative.”); Haugen\_00016373 at Haugen\_00016414  
27 (Mar. 9, 2020 presentation stating “All problematic users were experiencing multiple life  
impacts,” including loss of productivity, sleep disruption, relationship impacts, and safety risks);  
28 Haugen\_00005458 at Haugen\_00005500 (Sept. 18, 2019 presentation containing a slide stating

1           106. In 2014, a study of 10- to 12-year-old girls found that increased use of Facebook was  
2 linked with body image concerns, the idealization of thinness, and increased dieting.<sup>97</sup> (This study  
3 was sent to Mark Zuckerberg in 2018, in a letter signed by 118 public health advocates.)<sup>98</sup>

4           107. In 2016, a study demonstrated that young people who frequently use Defendants’  
5 apps are more likely to suffer sleep disturbances than their peers who use them infrequently.<sup>99</sup>  
6 Defendants’ products, driven by IVR algorithms, deprive users of sleep by sending push  
7 notifications and emails at night, prompting children to re-engage with the apps when they should  
8 be sleeping. Disturbed and insufficient sleep is associated with poor health outcomes,<sup>100</sup> including  
9 increased risk of major depression—by a factor of more than three—<sup>101</sup>and future suicidal behavior  
10 in adolescents.<sup>102</sup> The American Academy of Sleep Medicine has recommended that, in a 24-hour

11  
12 \_\_\_\_\_  
13 “But, We Make Body Image Issues Worse for 1 in 3 Teen Girls”).

14 <sup>97</sup> Marika Tiggemann & Amy Slater, *NetTweens: The Internet and Body Image Concerns in*  
15 *Preteenage Girls*, 34(5) *J. Early Adolesc.* 606-620 (Sept. 5, 2013),  
16 <https://journals.sagepub.com/doi/epub/10.1177/0272431613501083>.

17 <sup>98</sup> Campaign for a Commercial-Free Childhood, *Letter to Mark Zuckerberg Re: Facebook*  
18 *Messenger Kids* (Jan. 30, 2018), <https://fairplayforkids.org/wp-content/uploads/archive/develop-generate/gaw/FBMessengerKids.pdf>.

19 <sup>99</sup> Jessica C. Levenson et al., *The Association Between Social Media Use and Sleep Disturbance*  
20 *Among Young Adults*, 85 *Preventive Med.* 36–41 (Apr. 2016),  
21 <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025>.

22 <sup>100</sup> Jessica C. Levenson et al., *The Association Between Social Media Use and Sleep Disturbance*  
23 *Among Young Adults*, 85 *Preventive Med.* 36–41 (Apr. 2016),  
24 <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025>; National Institute of  
25 Mental Health. 2023. *The Teen Brain: 7 Things to Know*, available at  
26 <https://www.nimh.nih.gov/health/publications/the-teen-brain-7-things-to-know>; J. Campellone &  
27 R. Turley, *Understanding the teen brain*,  
28 <https://www.urmc.rochester.edu/encyclopedia/content.aspx?ContentTypeID=1&ContentID=3051>.

<sup>101</sup> R. Roberts & H Duong, *The Prospective Association between Sleep Deprivation and*  
*Depression among Adolescents*, 37(2) *Sleep* 239-44 (Feb. 1, 2014),  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3900610/>.

<sup>102</sup> X. Liu, D. Buysse, *Sleep and youth suicidal behavior: a neglected field*, 19(3) *Current Opinion*  
*in Psychiatry* 288-93 (May 2006), <https://pubmed.ncbi.nlm.nih.gov/16612215/>.

1 period, children aged 6–12 years should regularly sleep 9–12 hours and teenagers aged 13–18 years  
2 should sleep 8–10 hours.<sup>103</sup>

3 108. Another study reported that, 52% of girls said they use image filters every day, and  
4 80% reported using an app to change their appearance before the age of 13.<sup>104</sup> In fact, 77% of girls  
5 reported trying to change or hide at least one part of their body before posting a photo of themselves,  
6 and 50% believe they did not look good enough without editing.<sup>105</sup>

7 109. In 2017, British researchers asked 1,500 teens to rate how Instagram, Snapchat, and  
8 YouTube affected them on certain well-being measures, including anxiety, loneliness, body image,  
9 and sleep.<sup>106</sup> Teens rated all three platforms as having a negative impact on body image, “FOMO”  
10 (fear of missing out), and sleep. Teens also noted that Instagram and Snapchat had a negative impact  
11 on anxiety, depression, and loneliness.

12 110. In 2018, a *Journal of Social and Clinical Psychology* study examined a group of  
13 college students whose use of Instagram, Facebook, and Snapchat was limited to 10 minutes per day  
14 per platform. The study found that this limited-use group showed “significant reductions in  
15  
16

17 \_\_\_\_\_  
18 <sup>103</sup> S. Paruthi, L. Brooks, et al., *Consensus Statement of the American Academy of Sleep Medicine*  
19 *on the Recommended Amount of Sleep for Healthy Children: Methodology and Discussion*, 12 J  
20 Clin Sleep Med. 1549–61 (Nov. 2016), <https://pubmed.ncbi.nlm.nih.gov/27707447/>.

21 <sup>104</sup> Anna Haines, *From “Instagram Face” to “Snapchat Dysmorphia”*: How Beauty Filters Are  
22 *Changing the Way We See Ourselves*, Forbes (Apr. 27, 2021),  
23 [https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-](https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff)  
24 [dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff](https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff).

25 <sup>105</sup> Anna Haines, *From “Instagram Face” to “Snapchat Dysmorphia”*: How Beauty Filters Are  
26 *Changing the Way We See Ourselves*, Forbes (Apr. 27, 2021),  
27 [https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-](https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff)  
28 [dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff](https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff).

<sup>106</sup> Royal Society for Public Health, #StatusOfMind,  
26 <https://www.rsph.org.uk/static/uploaded/d125b27c-0b62-41c5-a2c0155a8887cd01.pdf>; see also  
27 Jonathan Haidt, *The Dangerous Experiment on Teen Girls*, The Atlantic (Nov. 21, 2021),  
28 [https://www.theatlantic.com/ideas/archive/2021/11/facebooks-dangerous-experiment-teen-](https://www.theatlantic.com/ideas/archive/2021/11/facebooks-dangerous-experiment-teen-girls/620767/)  
[girls/620767/](https://www.theatlantic.com/ideas/archive/2021/11/facebooks-dangerous-experiment-teen-girls/620767/).



1 loneliness and depression over three weeks” compared to a control group that used social media as  
2 usual.<sup>107</sup>

3 111. In 2018, a systematic literature review of nine studies published in the *Indian Journal*  
4 *of Psychiatry* concluded that dangerous features in social networking platforms “contribute to  
5 increased exposure to and engagement in self-harm behavior, as users tend to emulate self-injurious  
6 behavior of others online, adopt self-injurious practices from self-harm videos, or are encouraged  
7 and acclaimed by others, thus normalizing self-injurious thoughts and behavior.”<sup>108</sup>

8 112. A 2019 survey of American adolescents ages 12-14 found that a user’s displeasure  
9 with their body could be predicted based on their frequency of using social media (including  
10 Instagram and Facebook) and based on the extent to which they engaged in behaviors that adopt an  
11 observer’s point-of-view (such as taking selfies or asking others to “rate one’s looks”). This effect  
12 was more pronounced among girls than boys.<sup>109</sup>

13 113. A third study in 2019 of more than 6,500 American adolescents ranging in age from  
14 12 to 15 years old found that those who used social media for 3 hours or more per day were more  
15 likely to suffer from mental health problems such as anxiety and depression.<sup>110</sup> Notably, this  
16 association remained significant even *after* adjusting for demographics, past alcohol and marijuana  
17 use, and history of mental health problems.<sup>111</sup>

18 \_\_\_\_\_  
19 <sup>107</sup> Melissa G. Hunt et al., *No More FOMO: Limiting Social Media Decreases Loneliness and*  
20 *Depression*, 37 J. of Social & Clinical Psych. (Dec. 5, 2018),  
<https://guilfordjournals.com/doi/epdf/10.1521/jscp.2018.37.10.751>.

21 <sup>108</sup> Aksha Memon et al., *The role of online social networking on deliberate self-harm and*  
22 *suicidality in adolescents: A systematized review of literature*, 60(4) *Indian J Psychiatry* 384-92  
(Oct-Dec 2018), <https://pubmed.ncbi.nlm.nih.gov/30581202/>.

23 <sup>109</sup> Ilyssa Salomon & Christia Spears Brown, *The Selfie Generation: Examining the Relationship*  
24 *Between Social Media Use and Early Adolescent Body Image*, 39(4) *Journal of Early Adolescence*  
25 539-60 (2019), <https://journals.sagepub.com/doi/abs/10.1177/0272431618770809>.

26 <sup>110</sup> Kira Riehm et al., *Associations between time spent using social media and internalizing and*  
27 *externalizing problems among US youth*, 76(12) *JAMA Psychiatry* (2019),  
<https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2749480>.

28 <sup>111</sup> Kira Riehm et al., *Associations between time spent using social media and internalizing and*

1 114. In 2020, a study of Australian adolescents found that investment in others’ selfies  
2 (through likes and comments) was associated with greater odds of meeting criteria for  
3 clinical/subclinical bulimia nervosa, clinical/subclinical binge-eating disorder, night eating  
4 syndrome, and unspecified feeding and eating disorders.<sup>112</sup>

5 115. In 2020, a longitudinal study investigated whether “Facebook Addiction Disorder”  
6 predicted suicide-related outcomes and found that children and adolescents addicted to Facebook  
7 are more likely to engage in self-injurious behavior, such as cutting and suicidality.<sup>113</sup>

8 116. In 2020, clinical research demonstrated an observable link between youth social  
9 media use and disordered eating behavior.<sup>114</sup> The more time young girls spend using Defendants’  
10 products, the more likely they are to develop disordered eating behaviors.<sup>115</sup> And the more social  
11 media accounts adolescents have, the more disordered eating behaviors they exhibit.<sup>116</sup>

12 \_\_\_\_\_  
13 *externalizing problems among US youth*, 76(12) JAMA Psychiatry (2019),  
14 <https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2749480>.

15 <sup>112</sup> Alexandra R. Lonergan et al., *Protect Me from My Selfie: Examining the Association Between*  
16 *Photo-Based Social Media Behaviors and Self-Reported Eating Disorders in Adolescence*, Int’l J.  
of Eating Disorders (Apr. 7, 2020), <https://onlinelibrary.wiley.com/doi/epdf/10.1002/eat.23256>.

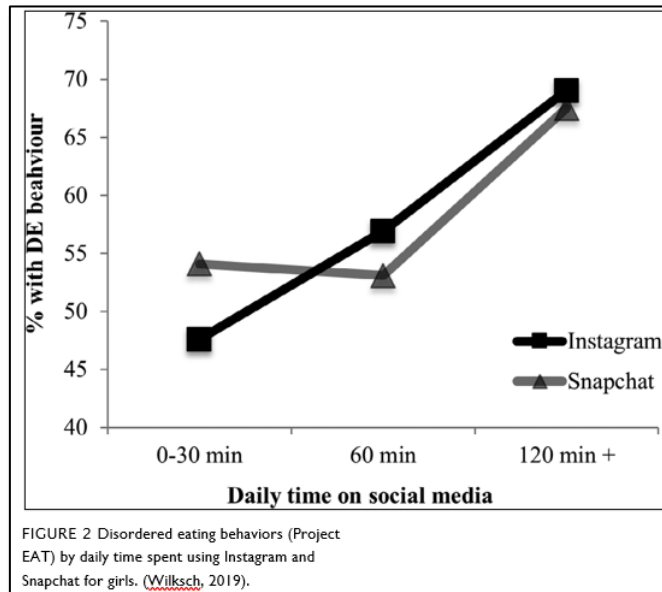
17 <sup>113</sup> See, e.g., Julia Brailovskaia et al., *Positive mental health mediates the relationship between*  
18 *Facebook addiction disorder and suicide-related outcomes: a longitudinal approach*, 23(05)  
Cyberpsychology, Behavior, and Social Networking (2020),  
19 <https://doi.org/10.1089/cyber.2019.0563>; Jean M. Twenge et al., *Increases in Depressive*  
20 *Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and*  
*Links to Increased New Media Screen Time*, 6(1) Clinical Psych. Sci. 3–17 (2018),  
21 <https://doi.org/10.1177/2167702617723376>.

22 <sup>114</sup> Simon M. Wilksch et al., *The relationship between social media use and disordered eating in*  
23 *young adolescents*, 53(1) Int’l J. Eating Disorders 96–106 (Jan. 2020),  
<https://pubmed.ncbi.nlm.nih.gov/31797420/>.

24 <sup>115</sup> Simon M. Wilksch et al., *The relationship between social media use and disordered eating in*  
25 *young adolescents*, 53(1) Int’l J. Eating Disorders 96–106 (Jan. 2020),  
<https://pubmed.ncbi.nlm.nih.gov/31797420/>.

26 <sup>116</sup> Simon M. Wilksch et al., *The relationship between social media use and disordered eating in*  
27 *young adolescents*, 53(1) Int’l J. Eating Disorders 96–106 (Jan. 2020),  
<https://pubmed.ncbi.nlm.nih.gov/31797420/>. **Error! Hyperlink reference not**  
28 **valid.** <https://pubmed.ncbi.nlm.nih.gov/31797420/>.





117. Eating disorders often occur simultaneously with other self-harm behaviors such as cutting and are often associated with suicide.<sup>117</sup>

118. In a 2021 study, female undergraduates were randomly shown thinspiration (low body mass index and not muscular), fitspiration (muscular and exercising), or neutral photos.<sup>118</sup> Thinspiration and fitspiration images lowered self-esteem, even in those with a self-perceived healthy weight.<sup>119</sup>

119. A 2022 study of Italian adolescent girls (12-17) and young women (18-28) found that Instagram’s image editing and browsing features, combined with an emphasis on influencer interactions, promulgated unattainable body ideals that caused users to compare their bodies to those ideals.<sup>120</sup> These trends were more prominent among adolescent girls, given their higher

<sup>117</sup> Sonja Swanson et al., *Prevalence and correlates of eating disorders in adolescents*, 68(7) Arch Gen Psychiatry 714-23 (Mar. 7, 2011), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5546800/>.

<sup>118</sup> Karikarn Chansiri & Thipkanok Wongphothiphan, *The indirect effects of Instagram images on women’s self-esteem: The moderating roles of BMI and perceived weight*, 0(0) New Media & Society (July 29, 2021), <https://journals.sagepub.com/doi/epub/10.1177/14614448211029975>.

<sup>119</sup> Karikarn Chansiri & Thipkanok Wongphothiphan, *The indirect effects of Instagram images on women’s self-esteem: The moderating roles of BMI and perceived weight*, 0(0) New Media & Society (July 29, 2021), <https://journals.sagepub.com/doi/epub/10.1177/14614448211029975>.

<sup>120</sup> Federica Pedalino & Anne-Linda Camerini, *Instagram use and body dissatisfaction: The*

1 susceptibility to social pressures related to their bodies and given the physical changes associated  
2 with puberty.

3 120. In 2023, a study of magnetic resonance images demonstrated that compulsive use of  
4 Defendants' apps measurably alters children's brains.<sup>121</sup> This study measured fMRI responses in  
5 12-year-old adolescents who used Facebook, Instagram, and Snapchat over a three-year period and  
6 found that neural patterns diverged. Specifically, those who engaged in high social media checking  
7 behavior "showed lower neural sensitivity to social anticipation" than those who engaged in low to  
8 moderate checking behavior.<sup>122</sup>

9 121. Defendants' apps have triggered depression, anxiety, eating disorders, self-harm, and  
10 suicidality among thousands of children, including the Plaintiffs in this action. Defendants have  
11 created nothing short of a national crisis.

12 122. From 2009 to 2019, the rate of high school students who reported persistent sadness  
13 or hopelessness increased by 40% (to one out of every three kids).<sup>123</sup> The share of kids who seriously  
14 considered suicide increased by 36%, and those that created a suicide plan increased by 44%.<sup>124</sup>  
15  
16

17 \_\_\_\_\_  
18 *mediating role of upward social comparison with peers and influencers among young females*,  
19 19(3) Int'l J of Environmental Research and Public Health 1543 (2022),  
20 <https://www.mdpi.com/1660-4601/19/3/1543>.

21 <sup>121</sup> Maria Maza et al., *Association of habitual checking behaviors on social media with  
22 longitudinal functional brain development*, 177(2) JAMA Ped. 160-67 (Jan. 3, 2023),  
23 <https://jamanetwork.com/journals/jamapediatrics/article-abstract/2799812>.

24 <sup>122</sup> Maria Maza et al., *Association of habitual checking behaviors on social media with  
25 longitudinal functional brain development*, 177(2) JAMA Ped. 160-67 (Jan. 3, 2023),  
26 <https://jamanetwork.com/journals/jamapediatrics/article-abstract/2799812>.

27 <sup>123</sup> *Protecting Youth Mental Health: The U.S. Surgeon General's Advisory* at 8, U.S. Dep't Health  
28 & Hum. Servs. (Dec. 7, 2021), <https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf>.

<sup>124</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-mental-health-advisory.pdf>.

1 123. From 2007 to 2019, suicide rates among youth aged 10-24 in the United States  
2 increased by 57%.<sup>125</sup> By 2018, suicide was the second leading cause of death for youth ages 10–  
3 24.<sup>126</sup>

4 124. From 2007 to 2016, emergency room visits for youth aged 5-17 rose 117% for  
5 anxiety disorders, 44% for mood disorders, and 40% for attention disorders.<sup>127</sup>

6 125. By 2019, one-in-five children aged 3-17 in the United States had a mental, emotional,  
7 developmental, or behavioral disorder.<sup>128</sup> Mental health issues are particularly acute among  
8 females.<sup>129</sup>

9 126. On December 7, 2021, the United States Surgeon General issued an advisory on the  
10 youth mental health crisis.<sup>130</sup> The Surgeon General explained, “[m]ental health challenges in  
11

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12 <sup>125</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-  
13 mental-health-advisory.pdf](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf).

14 <sup>126</sup> *AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental  
Health*, Am. Acad. Pediatrics (Oct. 19, 2021), [https://www.aap.org/en/advocacy/child-and-  
15 adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-  
16 child-and-adolescent-mental-health/](https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/).

17 <sup>127</sup> Charmaine Lo, *Children’s mental health emergency department visits: 2007-2016*, 145(6)  
Pediatrics e20191536 (June 2020), <https://doi.org/10.1542/peds.2019-1536>.

18 <sup>128</sup> *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by  
COVID-19 Pandemic*, U.S. Dep’t Health & Hum. Servs. (Dec. 14, 2021),  
19 [https://adasoutheast.org/u-s-surgeon-general-issues-advisory-on-youth-mental-health-crisis-  
20 further-exposed-by-covid-19-pandemic/](https://adasoutheast.org/u-s-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic/).

21 <sup>129</sup> *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by  
COVID-19 Pandemic*, U.S. Dep’t Health & Hum. Servs. (Dec. 14, 2021),  
22 [https://adasoutheast.org/u-s-surgeon-general-issues-advisory-on-youth-mental-health-crisis-  
23 further-exposed-by-covid-19-pandemic/](https://adasoutheast.org/u-s-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic/); see also Jean M. Twenge et al., *Increases in Depressive  
Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and  
24 Links to Increased New Media Screen Time*, 6(1) *Clinical Psych. Sci.* 3–17 (Nov. 14, 2017),  
25 <https://doi.org/10.1177/2167702617723376>.

26 <sup>130</sup> *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by  
COVID-19 Pandemic*, U.S. Dep’t Health & Hum. Servs. (Dec. 14, 2021),  
27 [https://adasoutheast.org/u-s-surgeon-general-issues-advisory-on-youth-mental-health-crisis-  
28 further-exposed-by-covid-19-pandemic/](https://adasoutheast.org/u-s-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic/).

1 children, adolescents, and young adults are real and widespread. Even before the pandemic, an  
2 alarming number of young people struggled with feelings of helplessness, depression, and thoughts  
3 of suicide—and rates have increased over the past decade.”<sup>131</sup> Those “mental health challenges were  
4 the leading cause of disability and poor life outcomes in young people.”<sup>132</sup>

5 127. On February 13, 2023, the CDC released new statistics revealing that, in 2021, one  
6 in three girls seriously considered attempting suicide.<sup>133</sup>

7 128. As discussed herein, each of Defendants’ products manipulates minor users’ brains  
8 by building in stimuli and social reward mechanisms (e.g., “Likes”) that cause users, such as  
9 Plaintiffs, to compulsively seek social rewards. That, in turn, leads to neuroadaptation; a child  
10 requires more and more stimuli to obtain the desired dopamine release, along with further  
11 impairments of decision-making. It also leads to reward-seeking through increasingly extreme  
12 content, which is more likely to generate intense reactions from other users. These consequences  
13 are the foreseeable results of Defendants’ engineering decisions.

14 **6. Defendants could have avoided harming Plaintiffs.**

15 129. Each Defendant solicited customers, including Plaintiffs, on the open market and  
16 encouraged the use of their defective apps.

17 130. Each Defendant offers its app to the consuming public with dangerous, standardized  
18 features and designs (discussed below) that users, like Plaintiffs, cannot bargain to change.

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20  
21 \_\_\_\_\_  
22 <sup>131</sup> *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by*  
*COVID-19 Pandemic*, U.S. Dep’t Health & Hum. Servs. (Dec. 14, 2021),  
23 [https://adasoutheast.org/u-s-surgeon-general-issues-advisory-on-youth-mental-health-crisis-](https://adasoutheast.org/u-s-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic/)  
[further-exposed-by-covid-19-pandemic/](https://adasoutheast.org/u-s-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic/).

24 <sup>132</sup> *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by*  
*COVID-19 Pandemic*, U.S. Dep’t Health & Hum. Servs. (Dec. 14, 2021),  
25 [https://adasoutheast.org/u-s-surgeon-general-issues-advisory-on-youth-mental-health-crisis-](https://adasoutheast.org/u-s-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic/)  
26 [further-exposed-by-covid-19-pandemic/](https://adasoutheast.org/u-s-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic/).

27 <sup>133</sup> Azeen Ghorayashi & Roni Caryn Rabin, *Teen Girls Report Record Levels of Sadness, C.D.C.*  
28 *Findings*, N.Y. Times (Feb. 13, 2023), [https://www.nytimes.com/2023/02/13/health/teen-girls-](https://www.nytimes.com/2023/02/13/health/teen-girls-sadness-suicide-violence.html)  
[sadness-suicide-violence.html](https://www.nytimes.com/2023/02/13/health/teen-girls-sadness-suicide-violence.html).

1           131. Plaintiffs (along with millions of other U.S. users) confer a benefit on each Defendant  
2 in exchange for using their respective products.

3           132. Each Defendant could have, but purposefully failed to, design its products to protect  
4 and avoid injury to kids and adolescent users, such as Plaintiffs.

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

8           134. Each Defendant knew or should have known that the more children use social media,  
9 the harder it is to quit.

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

12          136. Each Defendant knew or should have known that youth are especially vulnerable to  
13 long-term harm from its addictive products.

14          137. Each Defendant knew or should have known that the design of its products attracts,  
15 enables, and facilitates child predators, and that such predators use its apps to recruit and sexually  
16 exploit children for the production of CSAM and its distribution on Defendants' products.

17          138. Each Defendant knew or should have known that the longer adolescent users remain  
18 engaged with its products, the higher the risk that adult predators will target them.

19          139. Each Defendant knew or should have known that many of its users are under the age  
20 of 13.

21          140. Each Defendant failed to adequately warn Plaintiffs and Consortium Plaintiffs of the  
22 known risks and harms of using its products. Each Defendant avoided design changes that would  
23 have increased youth safety. And each Defendant pressed ahead with changes designed to keep kids  
24 hooked, even though they knew or should have known those changes posed a risk to the mental  
25 health of children and young adults.

26          141. Each Defendant was in a superior position to control the risks of harm, ensure the  
27 safety of its apps, insure against the defects, and spread the costs of any harm resulting from the  
28 defects.

1 142. Plaintiffs, Consortium Plaintiffs, and the consuming public did not have, and could  
2 not have had, as much knowledge as Defendants about Defendants’ apps and how they were  
3 defectively designed.

4 143. Consumers, including Plaintiffs and Consortium Plaintiffs, could not have inspected  
5 the apps before accepting them to learn of the defects or the harms that flow from the defects.

6 **7. Defendants consistently refer to and treat their apps as products.**

7 144. Each Defendant characterizes and treats their various apps as mass-produced, mass-  
8 marketed products that each of the Defendants designs, tests, researches, builds, ships, markets, and  
9 makes widely available in the stream of commerce for personal use by consumers, including youth.

10 145. For example, Defendants routinely characterize their social media platforms as  
11 products in their regulatory filings and communications with the financial markets and investors. In  
12 its 2022 Annual Report, Meta stated that “[t]he term ‘Family’ refers to our Facebook, Instagram,  
13 Messenger, and WhatsApp products,” and that “there are inherent challenges in measuring usage of  
14 our products across large online and mobile populations.”<sup>134</sup> Similarly, in its 2015 Annual Report,  
15 Google stated that its “core products such as ... YouTube... each have over one billion monthly  
16 active users.”<sup>135</sup> Likewise, in its 2022 Annual Report, Snap explains that its “flagship product,  
17 Snapchat, is a visual messaging application.”<sup>136</sup>

18 146. Defendants likewise routinely describe their apps as products in statements to public  
19 officials and users. In testimony to the Senate Commerce and Judiciary Committees, Mark  
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21 \_\_\_\_\_  
22 <sup>134</sup> Meta, 2022 Annual Report 5 (Feb. 2, 2023), <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001326801/e574646c-c642-42d9-9229-3892b13aabfb.pdf>.

23 <sup>135</sup> Google, 2015 Annual Report 2 (Feb. 11, 2016),  
24 <https://www.sec.gov/Archives/edgar/data/1288776/000165204416000012/goog10-k2015.htm>.

25 <sup>136</sup> Snap, Inc., *Snap, Inc. 2022 Annual Report* 10 (Jan. 31, 2023),  
26 <https://investor.snap.com/financials/Annual-Report/default.aspx>; see also Snap Inc., *Investor Letter Q3 2022 2* (Oct 20, 2022),  
27 [https://s25.q4cdn.com/442043304/files/doc\\_financials/2022/q3/Snap-Inc.-Q3-2022-Investor-Letter-\(10.20.2022\).pdf](https://s25.q4cdn.com/442043304/files/doc_financials/2022/q3/Snap-Inc.-Q3-2022-Investor-Letter-(10.20.2022).pdf), (“Our team remains focused on expanding our product offering and deepening engagement with our global community”).  
28

1 Zuckerberg stated that Facebook’s “controls are not just to make people feel safe; it’s actually what  
2 people want in the product.”<sup>137</sup> He noted that Facebook “want[s] our products to be valuable to  
3 people.”<sup>138</sup> And he stated that, “fundamentally, at our core, [Meta is] a technology company where  
4 the main thing that we do is have engineers and build products.”<sup>139</sup>

5 147. The other Defendants have made similar statements. In a written response to Senator  
6 Marsha Blackburn, Snap noted that it takes suggestions into consideration “when releasing  
7 products.”<sup>140</sup> In written testimony to the Senate Commerce Committee, a ByteDance witness  
8 referred to the “variety of tools and controls we have built into the product.”<sup>141</sup> YouTube executives  
9 have used similar language. In written testimony to the Senate Commerce Committee, one YouTube  
10 witness noted that consultants “work closely with the product teams to ensure that product design  
11 reflects an understanding of children’s unique needs.”<sup>142</sup> And in written testimony to the Senate  
12 Committee on Homeland Security and Governmental Affairs, YouTube’s Chief Product Officer

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15 <sup>137</sup> Bloomberg Government, Transcript of Mark Zuckerberg’s Senate Hearing, Washington Post  
16 (Apr. 10, 2018), <https://www.washingtonpost.com/news/the-switch/wp/2018/04/10/transcript-of-mark-zuckerbergs-senate-hearing/>.

17 <sup>138</sup> Bloomberg Government, Transcript of Mark Zuckerberg’s Senate Hearing, Washington Post  
18 (Apr. 10, 2018), <https://www.washingtonpost.com/news/the-switch/wp/2018/04/10/transcript-of-mark-zuckerbergs-senate-hearing/>.

19 <sup>139</sup> Bloomberg Government, Transcript of Mark Zuckerberg’s Senate Hearing, Washington Post  
20 (Apr. 10, 2018), <https://www.washingtonpost.com/news/the-switch/wp/2018/04/10/transcript-of-mark-zuckerbergs-senate-hearing/>.

21 <sup>140</sup> SNAP0000246 at SNAP0000250.

22 <sup>141</sup> *Protecting Kids Online: Snapchat, TikTok, and Youtube: Hearing Before the Subcomm. on  
23 Consumer Protection, Product Safety, and Data Security of the S. Comm. On Commerce, Science,  
24 and Transportation* (Oct. 26, 2021), [https://www.commerce.senate.gov/services/files/8C751FF4-  
25 A1FD-4FCA-80F6-C84BEB04C2F9](https://www.commerce.senate.gov/services/files/8C751FF4-A1FD-4FCA-80F6-C84BEB04C2F9).

26 <sup>142</sup> *Protecting Kids Online: Snapchat, TikTok, and Youtube: Hearing Before the Subcomm. on  
27 Consumer Protection, Product Safety, and Data Security of the S. Comm. On Commerce, Science,  
28 and Transportation* (Oct. 26, 2022), [https://www.commerce.senate.gov/services/files/2FBF8DE5-  
9C3F-4974-87EE-01CB2D262EEA](https://www.commerce.senate.gov/services/files/2FBF8DE5-9C3F-4974-87EE-01CB2D262EEA).



1 stated that “responsibility is our top priority at YouTube and informs every product and policy  
2 decision we make.”<sup>143</sup>

3 148. Defendants employ “product managers” and have established “product teams”  
4 responsible for the development, management, operation, and marketing of their apps. For example,  
5 Meta lists on the careers section of its website multiple positions for “Product Manager[s]”.<sup>144</sup>  
6 Snap’s website lists job openings for a “Product Marketing Manager, App Ads” and a “Director of  
7 Product Management, Ad Marketplace and Quality.”<sup>145</sup> TikTok Careers has employment  
8 opportunities for a Livestream Product Manager,” “Senior Product Manager-Operation Platform,”  
9 “Vertical Product Marketing Manager,” and “Technical Product Specialist – Platforms.”<sup>146</sup> Earlier  
10 this year, YouTube Careers was hiring for a “Director Product Management, YouTube Shorts  
11 Discovery.”<sup>147</sup> YouTube’s pitch: “Make products as fun as they are useful.”<sup>148</sup>

12 149. Defendants understand that, when they are developing their apps, they are building,  
13 testing, doing quality control on, and modifying their “products.” For instance, in a 2013 earnings  
14 call, one Meta employee noted, “We will continue to focus our development efforts to build products  
15 that drive engagement for people of all ages.”<sup>149</sup> In a 2012 interview at Tech Crunch Disrupt,

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17 <sup>143</sup> *Social Media’s Impact on Homeland Security, Part II: Hearing Before the S. Comm. On*  
18 *Homeland Security and Governmental Affairs* (Sept. 14, 2022) (written testimony of Neal Mohan,  
19 Chief Product Officer, YouTube and SVP, Google), <https://www.hsgac.senate.gov/wp-content/uploads/imo/media/doc/Testimony-Mohan-2022-09-14.pdf>.

20 <sup>144</sup> Meta Careers, <https://www.metacareers.com/>.

21 <sup>145</sup> Snap Inc., Jobs, <https://snap.com/en-US/jobs>.

22 <sup>146</sup> TikTok, Careers, <https://careers.tiktok.com/>.

23 <sup>147</sup> YouTube, Careers, <https://www.youtube.com/jobs/>; see also Kevin Roose, *YouTube’s Product*  
24 *Chief on Online Radicalization and Algorithmic Rabbit Holes*, N.Y. Times (Mar. 29, 2019),  
25 <https://www.nytimes.com/2019/03/29/technology/youtube-online-extremism.html> (interview with  
26 “YouTube’s chief product officer”: “our product teams here are thinking of all of these  
27 solutions”).

28 <sup>148</sup> YouTube, *YouTube Jobs*. <https://www.youtube.com/jobs/product-and-design/>.

<sup>149</sup> Facebook, *Facebook Q3 2013 Earnings Call*, Zuckerberg Transcripts 236 (Oct. 30, 2013),



1 Zuckerberg noted that Instagram “has a super talented group of, of engineers. They’re building [this]  
2 amazing product.”<sup>150</sup> Meta employees often complement each other’s “great product  
3 improvement[s].”<sup>151</sup>

4 150. Other companies operate similarly. In a blog post, Snap referred to its “rebuild” of  
5 the Snapchat “Android product.”<sup>152</sup> YouTube asked its users for “Your Help to Test New Product  
6 Features,” saying the “main goal of this study is to test new product features to better understand  
7 your needs.”<sup>153</sup> Likewise, ByteDance’s internal documents routinely refer to TikTok as a product,  
8 including in references to plans for a “Product Feature Livestream,” “[c]omplet[ing] the team  
9 building of product [and] basic figures of product,” the importance of “reviewing product issues,”<sup>154</sup>  
10 and various “Product operations” issues including “translat[ion] into English.”<sup>155</sup>

11 151. Defendants also set up workflows and systems that “package” and “ship” their apps  
12 as “products.” Zuckerberg has explained how “we ship a lot of tweaks to the products, or small  
13 changes to existing products.”<sup>156</sup> ByteDance has referred to

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16 [https://seekingalpha.com/article/1790372-facebooks-ceo-discusses-q3-2013-results-earnings-call-](https://seekingalpha.com/article/1790372-facebooks-ceo-discusses-q3-2013-results-earnings-call-transcript)  
17 [transcript.](https://seekingalpha.com/article/1790372-facebooks-ceo-discusses-q3-2013-results-earnings-call-transcript)

18 <sup>150</sup> Dominic Rushe, *Facebook’s stock market debut disappointing, says Zuckerberg*, The Guardian  
19 (Sept. 12, 2012), [https://www.theguardian.com/technology/2012/sep/11/mark-zuckerberg-](https://www.theguardian.com/technology/2012/sep/11/mark-zuckerberg-facebook-stock-market-disappointing)  
20 [facebook-stock-market-disappointing.](https://www.theguardian.com/technology/2012/sep/11/mark-zuckerberg-facebook-stock-market-disappointing)

21 <sup>151</sup> Haugen\_000020607 at Haugen\_000020610.

22 <sup>152</sup> Snap Newsroom, *Restructuring and Refocusing our Business* (Aug. 31, 2022),  
23 [https://newsroom.snap.com/restructuring-and-refocusing-our-business.](https://newsroom.snap.com/restructuring-and-refocusing-our-business)

24 <sup>153</sup> YouTube Official Blog, *We Need Your Help to Test New Product Features* (July 16, 2012),  
25 [https://blog.youtube/news-and-events/we-need-your-help-to-test-new-product/.](https://blog.youtube/news-and-events/we-need-your-help-to-test-new-product/)

26 <sup>154</sup> TikTok3047MDL-001-00000769.

27 <sup>155</sup> TikTok3047MDL-001-00058090 at TikTok3047MDL-001-00058096.

28 <sup>156</sup> Facebook, *Facebook Q2 2013 Earnings Call* (July 24, 2013). Zuckerberg Transcripts.  
[https://www.slideshare.net/turk5555/facebook-q2-2013-earnings-conference-call-of-july-24-2013.](https://www.slideshare.net/turk5555/facebook-q2-2013-earnings-conference-call-of-july-24-2013)

1           152. Defendants treat their apps as products in customer research, branding, marketing,  
2 and growth discussions. In text messages with Kevin Systrom in 2012, Zuckerberg noted, “I’m  
3 really excited about what we can do to grow Instagram as an independent brand and product.”<sup>157</sup> In  
4 an internal document from 2018, Instagram employees noted that only “[a] few more days will be  
5 needed before we have an idea of how good our product-market fit is.”<sup>158</sup> Similarly, TikTok’s  
6 Product Policies note that “[e]ach product has its own set of guidelines ... but they are adjusted to  
7 reflect specific product’s mission and vision.”<sup>159</sup> Google has been equally candid in referring to  
8 YouTube as a “product,” publishing an anniversary post entitled, “A Look Back as We Move  
9 Forward: YouTube Product Launches in 2011.”<sup>160</sup>

10           153. Meta has characterized Instagram and Facebook as “products” when discussing the  
11 harms and injuries that those apps inflict on users. Meta described as a “product” issue the role of  
12 Instagram’s “Explore” feature in elevating the risk of suicide and self-injury in certain users.<sup>161</sup> Meta  
13 employees have characterized as a “product” issue users’ addictive use of Instagram.<sup>162</sup> Still another  
14 Meta employee has expressed concern about Facebook, stating “I’m anxious about whether FB the  
15 product is good for the world.”<sup>163</sup>

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17 \_\_\_\_\_  
18 <sup>157</sup> Facebook, Facebook text log between Mark Zuckerberg and Kevin Systrom, U.S. House  
19 Committee on the Judiciary (2012 document produced in the July 29, 2020 hearing),  
[https://epublications.marquette.edu/zuckerberg\\_files\\_transcripts/1330/](https://epublications.marquette.edu/zuckerberg_files_transcripts/1330/).

20 <sup>158</sup> META3047MDL-003-000031888.

21 <sup>159</sup> TikTok3047MDL-001-00060877.

22 <sup>160</sup> YouTube Official Blog, *A Look Back as We Move Forward: YouTube Product Launches in*  
23 *2011*, (Jan. 23, 2012). [https://blog.youtube/news-and-events/look-back-as-we-move-forward-](https://blog.youtube/news-and-events/look-back-as-we-move-forward-youtube/)  
[youtube/](https://blog.youtube/news-and-events/look-back-as-we-move-forward-youtube/).

24 <sup>161</sup> META3047MDL-003-00068863 at META3047MDL-003-00068883.

25 <sup>162</sup> Haugen\_00010114 at Haugen 00010127 (“It seems clear from what’s presented here that some  
26 of our users are addicted to our products. And I worry that driving sessions incentivizes us to  
27 make our products more addictive[.]”).

28 <sup>163</sup> Haugen\_00012484 at Haugen 00012553.

1           **B.       FACTUAL ALLEGATIONS AS TO META**

2           **1.       Background and overview of Meta’s products.**

3           154. Meta coded, engineered, manufactured, produced, assembled, and operates  
4 Facebook and Instagram, two of the world’s most popular social media products, and placed the  
5 same into the stream of commerce. In 2022, two billion users worldwide were active on Instagram  
6 each month, and almost three billion were monthly active users of Facebook.<sup>164</sup> This enormous  
7 reach has been accompanied by enormous damage for Plaintiffs and other adolescent users.

8           155. The Facebook and Instagram products were made and distributed with the intent to  
9 be used or consumed by the public as part of the regular business of Meta, the seller and/or  
10 distributor of Facebook and Instagram. Facebook and Instagram are not services; rather, they are  
11 akin to tangible products for purposes of product liability law. When installed on a consumer’s  
12 device, the Meta products have a definite appearance and location, and are operated by a series of  
13 physical swipes and gestures. Facebook and Instagram are personally moveable, and cannot be  
14 credibly construed as simply “ideas” or “information.”

15           156. Meta understands that its products are used by kids under 13: “[T]here are definitely  
16 kids this age on IG [Instagram].”<sup>165</sup> Meta understands that its products are addictive: “(1) teens feel  
17 addicted to IG and feel a pressure to be present, (2) like addicts, they feel that they are unable to  
18 stop themselves from being on IG, and (3) the tools we currently have aren’t effective at limiting  
19 their time on the ap (sic).”<sup>166</sup> Meta also understands that addictive use leads to problems: “it just  
20 keeps people coming back even when it stops being good for them.”<sup>167</sup> Further, Meta It also

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24 <sup>164</sup> Alex Barinka, *Meta’s Instagram Users Reach 2 Billion, Closing In on Facebook*, Bloomberg  
25 (Oct. 26, 2022), [https://www.bloomberg.com/news/articles/2022-10-26/meta-s-instagram-users-  
reach-2-billion-closing-in-on-facebook](https://www.bloomberg.com/news/articles/2022-10-26/meta-s-instagram-users-reach-2-billion-closing-in-on-facebook).

26 <sup>165</sup> META3047MDL-003-00123666 at META3047MDL-003-00123666.

27 <sup>166</sup> META3047MDL-003-00157036 at META3047MDL-003-00157036.

28 <sup>167</sup> META3047MDL-003-00011760 at META3047MDL-003-00011761.

1 understands that these problems can be so extreme as to include encounters between adults and  
2 minors—with such “sex-talk” 32x more prevalent on Instagram than on Facebook.<sup>168</sup>

3 157. Despite this knowledge, Meta has abjectly failed at protecting child users of  
4 Instagram and Facebook. Rather than resolving the problems created by its products, “the mental  
5 health team stopped doing things . . . it was defunded . . . completely stopped.”<sup>169</sup> “We’ve  
6 consistently deprioritized addiction as a work area.”<sup>170</sup> Zuckerberg himself was personally warned:  
7 “We are not on track to succeed for our core well-being topics (problematic use, bullying &  
8 harassment, connections, and SSI), and are at increased regulatory risk and external criticism. These  
9 affect everyone, especially Youth and Creators; if not addressed, these will follow us into the  
10 Metaverse. . . .”<sup>171</sup>

11 158. Yet Meta did nothing. Its reason was simple: “the growth impact was too high.”<sup>172</sup>  
12 Taking action would lower usage of (and therefore lower profits earned from) a critical audience  
13 segment. “Youth and Teens are critically important to Instagram . . . there’s a new group of 13-year-  
14 olds every year and the competition over their Social Media engagement has never been more  
15 fierce.”<sup>173</sup>

16 159. Meta’s frequent gestures toward youth safety were never serious and always driven  
17 by public relations: “it’s all theatre.”<sup>174</sup> Meta offered tools to kids and parents, like “time spent,”  
18 that it knew presented false data—“Our data as currently shown is incorrect. . . . We’re sharing bad  
19  
20

21 <sup>168</sup> META3047MDL-003-00119838 at META3047MDL-003-00119838.

22 <sup>169</sup> META3047MDL-003-00011697 at META3047MDL-003-00011698.

23 <sup>170</sup> META3047MDL-003-00157133 at META3047MDL-003-00157134.

24 <sup>171</sup> META3047MDL-003-00188109 at META3047MDL-003-00188114 (footnote omitted). “SSI”  
25 refers to “suicide and self-injury.” META3047MDL-003-00068863.

26 <sup>172</sup> META3047MDL-003-00013254 at META3047MDL-003-00013254.

27 <sup>173</sup> META3047MDL-003-00030070 at META3047MDL-003-00030071.

28 <sup>174</sup> META3047MDL-003-00053803 at META3047MDL-003-00053803.

1 metrics externally. . . . we vouch for these numbers.”<sup>175</sup> At the same time, Meta engaged in a cynical  
2 campaign to “counter-messag[e] around the addiction narrative” by discrediting existing research  
3 as “completely made up. . . .”<sup>176</sup> Meta knew better. Meta failed to prevent the harms suffered by  
4 Plaintiffs, despite having ample ability and knowledge.

5 **a. Meta’s origins and the development of Facebook.**

6 160. In October 2003, a sophomore at Harvard College named Mark Zuckerberg hacked  
7 into the websites of Harvard’s residential dorms to collect photos of students. He then designed a  
8 website called “Facemash” that invited users to rank the “hotness” of female students by comparing  
9 their photos side-by-side. In just one day, Facemash users cast over 22,000 votes judging the looks  
10 of women at Harvard.<sup>177</sup> This was precisely the point of Facemash, as its homepage made clear:  
11 “Were we let in for our looks? No. Will we be judged on them? Yes.” When interviewed about  
12 Facemash, Zuckerberg stated, “I’m a programmer and I’m interested in the algorithms and math  
13 behind it.” Zuckerberg was summoned to appear before Harvard’s disciplinary body.

14 161. After narrowly escaping expulsion, Zuckerberg began writing code for a new  
15 website, thefacebook.com. The growth of the product that subsequently became Facebook has been  
16 extensively documented and was the subject of an Academy Award-winning film.<sup>178</sup> By the end of  
17 2005, Facebook had expanded its reach to thousands of colleges and high schools in the United  
18 States and abroad. Over the coming years, Facebook grew well beyond campuses, reaching over

19 \_\_\_\_\_  
20 <sup>175</sup> META3047MDL-003-00157133.

21 <sup>176</sup> META3047MDL-003-00082165 at META3047MDL-003-00082165 - META3047MDL-003-  
22 00082166.

23 <sup>177</sup> Katherine Kaplan, *Facemash Creator Survives Ad Board*, Harvard Crimson (Nov. 19, 2003),  
24 <https://www.thecrimson.com/article/2003/11/19/facemash-creator-survives-ad-board-the/>; Bari  
25 Schwartz, *Hot or Not? Website Briefly Judges Looks*, Harvard Crimson (Nov. 4, 2003),  
26 <https://www.thecrimson.com/article/2003/11/4/hot-or-not-website-briefly-judges/>; Sam Brodsky,  
27 *Everything to Know About Facemash, the Site Zuckerberg Created in College to Rank ‘Hot’  
Women*, Metro (Apr. 12, 2018), [https://www.metro.us/everything-to-know-about-facemash-the-  
site-zuckerberg-created-in-college-to-rank-hot-women/](https://www.metro.us/everything-to-know-about-facemash-the-site-zuckerberg-created-in-college-to-rank-hot-women/); Noam Cohen (@noamcohen), Twitter  
(Mar. 20, 2018, 3:27 PM).

28 <sup>178</sup> *The Social Network* (Columbia Pictures 2010).

1 100 million total active users by Fall 2008. By February 2011, Facebook had become the largest  
2 online photo host, holding nearly 100 billion photos.<sup>179</sup> By the end of 2011, Facebook, Inc. had  
3 turned its initial losses into immense profitability, bringing in annual revenues of \$3.7 billion and  
4 working with an operating income of \$1.7 billion.<sup>180</sup>

5 162. However, Facebook knew its future success was not guaranteed. On February 1,  
6 2012, Facebook, Inc. filed with the SEC for an initial public offering. The company’s filing noted  
7 that its historic performance might not continue indefinitely: “A number of other social networking  
8 companies that achieved early popularity have since seen their active user bases or levels of  
9 engagement decline, in some cases precipitously. There is no guarantee that we will not experience  
10 a similar erosion of our active user base or engagement levels. A decrease in user retention, growth,  
11 or engagement could render Facebook less attractive to developers and advertisers, which may have  
12 a material and adverse impact on our revenue, business, financial condition, and results of  
13 operations.”<sup>181</sup>

14 163. Facebook, Inc. also disclosed that the proliferation of smartphones could materially  
15 affect its ongoing prospects. “[O]ur users could decide to increasingly access our products primarily  
16 through mobile devices. We do not currently directly generate any meaningful revenue from the use  
17 of Facebook mobile products, and our ability to do so successfully is unproven. Accordingly, if  
18 users continue to increasingly access Facebook mobile products as a substitute for access through  
19  
20

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21 <sup>179</sup> Richard MacManus, *Facebook Mobile Usage Set to Explode*, Read Write Web (Oct. 27, 2011),  
22 [https://web.archive.org/web/20120520003847/http://www.readwriteweb.com/archives/facebook-  
23 mobile-usage-set-to-explode.php](https://web.archive.org/web/20120520003847/http://www.readwriteweb.com/archives/facebook-mobile-usage-set-to-explode.php); Athima Chansanchai, *One Third of Year’s Digital Photos Are*  
24 *on Facebook*, NBC News (Sept. 20, 2011), [https://www.nbcnews.com/news/world/one-third-  
years-digital-photos-are-facebook-flna120576](https://www.nbcnews.com/news/world/one-third-years-digital-photos-are-facebook-flna120576).

25 <sup>180</sup> Erick Schonfeld, *Facebook’s Profits: \$1 Billion, On \$3.7 Billion in Revenues*, TechCrunch  
26 (Feb. 1, 2012), <https://techcrunch.com/2012/02/01/facebook-1-billion-profit/>.

27 <sup>181</sup> Facebook, Inc., Registration Statement (Form S-1) (Feb. 1, 2012) at 11,  
28 [https://www.sec.gov/Archives/edgar/data/1326801/000119312512034517/d287954ds1.htm#toc28  
7954\\_2](https://www.sec.gov/Archives/edgar/data/1326801/000119312512034517/d287954ds1.htm#toc287954_2).

1 personal computers, and if we are unable to successfully implement monetization strategies for our  
2 mobile users, our revenue and financial results may be negatively affected.”<sup>182</sup>

3 164. Facebook actively pursued changes to its product, including adding design features  
4 offered to the public. As a result of these actions, Facebook achieved its goal. As of October 2021,  
5 Facebook had ballooned to roughly 2.91 billion monthly active users, thus reaching 59% of the  
6 world’s social networking population, the only social media product to reach over half of all social  
7 media users. At least 6% of these users are children in the U.S. between the ages of 9 and 11.<sup>183</sup>

8 165. Since its inception, Facebook has implemented several changes, developments, and  
9 designs to its product to prolong user engagement and impose alterations to the user experience. As  
10 discussed further below, several changes, developments, and designs render the product defective  
11 and harmful.

12 **b. Modifications of Facebook’s product features over time.**

13 166. When Meta launched thefacebook.com on February 4, 2004, only Harvard students  
14 could create accounts using their university-issued email addresses. In March 2004, students at  
15 Stanford, Columbia, and Yale were permitted to join, and eventually, any student with a college- or  
16 university-issued email address could join Facebook.<sup>184</sup> In 2005, Facebook was opened to high  
17 school students, provided they were invited by someone who was already using the site.<sup>185</sup> By  
18  
19

20 <sup>182</sup> Facebook, Inc., Registration Statement (Form S-1) (Feb. 1, 2012) at 11,  
21 [https://www.sec.gov/Archives/edgar/data/1326801/000119312512034517/d287954ds1.htm#toc287954\\_2](https://www.sec.gov/Archives/edgar/data/1326801/000119312512034517/d287954ds1.htm#toc287954_2).

22 <sup>183</sup> Katherine Schaeffer, *7 facts about Americans and Instagram*, Pew Research Center (Oct. 7,  
23 2021), <https://www.pewresearch.org/fact-tank/2021/10/07/7-facts-about-americans-and-instagram/>.

24 <sup>184</sup> Saul Hansell, *Site Previously for Students Will Be Opened to Others*, N.Y. Times (Sept. 12,  
25 2006), <https://www.nytimes.com/2006/09/12/technology/site-previously-for-students-will-be-opened-to-others.html>.

26 <sup>185</sup> Ellen Rosen, *THE INTERNET; Facebook.com Goes to High School*, N.Y. Times (Oct. 16,  
27 2005), <https://www.nytimes.com/2005/10/16/nyregion/the-internet-facebookcom-goes-to-high-school.html>.  
28

1 September 2006, Facebook was opened to all users.<sup>186</sup> At the time, Meta claimed that it was open  
2 only to persons aged 13 and older with a valid email address.<sup>187</sup> However, Meta did not require  
3 verification of a user’s age or identity and did not verify users’ email addresses. As a result, underage  
4 users could easily register an account with and access Facebook.

5 167. At first, Facebook was a collection of personal profiles and single photos. It was  
6 described by the *New York Times* as “a fancy electronic version of the whiteboard that students often  
7 mount on their doors to leave and receive messages.”<sup>188</sup> Users could post a single profile picture,  
8 add personal details such as gender, birthdate, phone number, and interests, or connect with other  
9 users by “friending” them, either by searching for them or inviting them by email. Users could also  
10 display their relationship statuses or, alternatively, what they were “[l]ooking for” (e.g., friendship,  
11 dating, a relationship, “random play,” or “whatever I can get”) and “[i]nterested in” (e.g., women,  
12 men). In September 2004, however, Meta introduced the “Wall,” which allowed users to interact  
13 with “friends” by posting on each other’s profiles. This product feature kept users returning to  
14 Facebook to monitor Wall activity.

15 168. In 2005, Facebook began allowing users to upload an unlimited number of photos,  
16 making it the first photo hosting website to do so.<sup>189</sup>

17 169. In 2006, Meta introduced the Newsfeed to Facebook.<sup>190</sup> While previously “[e]very

18 \_\_\_\_\_  
19 <sup>186</sup> Saul Hansell, *Site Previously for Students Will Be Opened to Others*, N.Y. Times (Sept. 12,  
20 2006), <https://www.nytimes.com/2006/09/12/technology/site-previously-for-students-will-be-opened-to-others.html>.

21 <sup>187</sup> Saul Hansell, *Site Previously for Students Will Be Opened to Others*, N.Y. Times (Sept. 12,  
22 2006), <https://www.nytimes.com/2006/09/12/technology/site-previously-for-students-will-be-opened-to-others.html>.

23 <sup>188</sup> Ellen Rosen, *THE INTERNET; Facebook.com Goes to High School*, N.Y. Times (Oct. 16,  
24 2005), <https://www.nytimes.com/2005/10/16/nyregion/the-internet-facebookcom-goes-to-high-school.html>.

25 <sup>189</sup> Craig Kanalley, *A History of Facebook Photos (Infographic)*, The Huffington Post (Aug. 2,  
26 2011), [https://www.huffpost.com/entry/facebook-photos-infographic\\_n\\_916225](https://www.huffpost.com/entry/facebook-photos-infographic_n_916225).

27 <sup>190</sup> Think Marketing, *This Is How Facebook Has Changed Over the Past 14 Years* (February 6,  
28 2018), <https://thinkmarketingmagazine.com/facebook-celebrates-14-years-of-milestones-a-timeline/>.



1 browsing session was like a click-powered treasure hunt,”<sup>191</sup> the Newsfeed provided a centralized  
2 home page where users could view their friends’ activity, including any changes to their profiles or  
3 activity on the app, such as, for example, uploading new pictures, or a change in relationship  
4 status.<sup>192</sup> It was the first “social feed” of its kind, and increased time spent on the product.<sup>193</sup> Users  
5 immediately decried this feature as an invasion of privacy.<sup>194</sup> Mark Zuckerberg rationalized the  
6 feature by saying “we agree, stalking isn’t cool; but being able to know what’s going on in your  
7 friends’ lives is.”<sup>195</sup> The Newsfeed algorithm was originally designed to maximize a user’s time  
8 spent in one session. However, Meta later changed the code to maximize as many use sessions as  
9 possible. The frequency of sessions is a strong indicator of problematic use, a point internal  
10 Facebook researchers have made when suggesting that Facebook should “help people consolidate  
11 their use of Facebook into fewer sessions.”<sup>196</sup> Despite this knowledge, Meta continued to focus on  
12 maximizing sessions, including for teens,<sup>197</sup> even prioritizing the metric over “integrity”  
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15 <sup>191</sup> Jillian D’Onfro, *Facebook’s News Feed is 10 years old. This is how the site has changed*,  
16 World Economic Forum (Sept. 9, 2016), [https://www.weforum.org/agenda/2016/09/facebooks-  
news-feed-is-10-years-old-this-is-how-the-site-has-changed](https://www.weforum.org/agenda/2016/09/facebooks-news-feed-is-10-years-old-this-is-how-the-site-has-changed).

17 <sup>192</sup> Jillian D’Onfro, *Facebook’s News Feed is 10 years old. This is how the site has changed*,  
18 World Economic Forum (Sept. 9, 2016), [https://www.weforum.org/agenda/2016/09/facebooks-  
news-feed-is-10-years-old-this-is-how-the-site-has-changed](https://www.weforum.org/agenda/2016/09/facebooks-news-feed-is-10-years-old-this-is-how-the-site-has-changed).

19 <sup>193</sup> Jillian D’Onfro, *Facebook’s News Feed is 10 years old. This is how the site has changed*,  
20 World Economic Forum (Sept. 9, 2016), [https://www.weforum.org/agenda/2016/09/facebooks-  
news-feed-is-10-years-old-this-is-how-the-site-has-changed](https://www.weforum.org/agenda/2016/09/facebooks-news-feed-is-10-years-old-this-is-how-the-site-has-changed).

21 <sup>194</sup> Moneywatch, *Facebook Under Fire for New Feature*, CBS News (Sept. 7, 2006),  
22 <https://www.cbsnews.com/news/facebook-under-fire-for-new-feature/>.

23 <sup>195</sup> Gillian D’Onfro, *Facebook’s News Feed is 10 years old. This is how the site has changed*,  
24 World Economic Forum (Sept. 9, 2016), [https://www.weforum.org/agenda/2016/09/facebooks-  
news-feed-is-10-years-old-this-is-how-the-site-has-changed](https://www.weforum.org/agenda/2016/09/facebooks-news-feed-is-10-years-old-this-is-how-the-site-has-changed).

25 <sup>196</sup> Haugen\_00010114 at Haugen\_00010121.

26 <sup>197</sup> *See, e.g.*, META3047MDL-003-00161881 at META3047MDL-003-00161915 (highlighting  
27 moderate decline in sessions among teen Instagram users in the United States).  
28

1 improvements to its products.<sup>198</sup>

2 170. In May 2007, Meta launched a video service on Facebook, which allowed it to  
3 compete with YouTube and the then-popular Myspace.<sup>199</sup> Users could upload videos, or record them  
4 from a webcam.

5 171. In April 2008, Meta launched Facebook Chat, which later became Facebook  
6 Messenger, allowing users to have private conversations with each other.<sup>200</sup> Facebook Chat  
7 appeared as a permanent bar across the bottom of users' screens; it also provided users the ability  
8 to see which friends were "online" and presumably available to chat. Facebook Chat allowed users  
9 to immerse themselves even deeper into Meta's product; one commentator noted that, "[b]y making  
10 Facebook more real time/presence oriented, Facebook session length should go up a lot."<sup>201</sup>

11 172. In May 2008, Meta added a "People You May Know" feature to the product, touting  
12 it as a way to "connect [users] to more of your friends" on Facebook.<sup>202</sup> Facebook's algorithms  
13 utilize the vast amount of data it collects from its users to suggest users for "friending" to each  
14 other.<sup>203</sup> It utilizes information such as a user's friends list, their friends' friends list, education  
15  
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18 <sup>198</sup> See META3047MDL-003-00170806 at META3047MDL-003-00170822 (Instagram sessions  
19 "cannot decrease").

20 <sup>199</sup> Pete Cashmore, *Facebook Video Launches: YouTube Beware!*, Mashable (May 24, 2007),  
21 <https://mashable.com/archive/facebook-video-launches>.

22 <sup>200</sup> Dan Farber, *Facebook Chat begins to roll out*, CNET (April 6, 2008),  
23 <https://www.cnet.com/culture/facebook-chat-begins-to-roll-out/>.

24 <sup>201</sup> Dan Farber, *Facebook Chat begins to roll out*, CNET (April 6, 2008),  
25 <https://www.cnet.com/culture/facebook-chat-begins-to-roll-out/>.

26 <sup>202</sup> Kashmir Hill, *'People You May Know: ' A Controversial Facebook Feature's 10-Year History*,  
27 Gizmodo (Aug. 8, 2018), <https://gizmodo.com/people-you-may-know-a-controversial-facebook-features-1827981959>.

28 <sup>203</sup> Kashmir Hill, *'People You May Know: ' A Controversial Facebook Feature's 10-Year History*,  
Gizmodo (Aug. 8, 2018), <https://gizmodo.com/people-you-may-know-a-controversial-facebook-features-1827981959>.

1 information, and work information, along with other data, to make these suggestions.<sup>204</sup> Some users  
2 dislike the feature, complaining that it constantly shows them people they do not want to friend, or  
3 even suggests people in sexually explicit poses,<sup>205</sup> but Facebook does not provide the option to  
4 disable this feature.

5 173. In February 2009, Meta launched the “Like” button on Facebook.<sup>206</sup> The button  
6 allowed users to quickly react to content, as opposed to typing out a comment. Facebook’s algorithm  
7 counts and displays likes to other users. The measure also served as a social measuring stick, by  
8 which users could gauge the success of their posts, photographs, and videos. Soon after, Meta  
9 expanded the “Like” feature to comments as well. Users could also use the “Like” button to follow  
10 public figures, such as brands or publishers. When a user liked a brand, for example, Meta would  
11 use that information to show ads for that brand to the user’s friends on Facebook.<sup>207</sup> In April 2010,  
12 Meta launched “social plug-ins” that would allow people to “Like” things on the Internet outside of  
13 Facebook. Meta used the button to track Facebook users’ engagement across the Internet, leveraging  
14 the data it gathered to target ads and fuel the Newsfeed algorithm.<sup>208</sup> The button also shaped users’

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16 <sup>204</sup> Kashmir Hill, ‘People You May Know:’ A Controversial Facebook Feature’s 10-Year History,  
17 Gizmodo (Aug. 8, 2018), <https://gizmodo.com/people-you-may-know-a-controversial-facebook-features-1827981959>.

18 <sup>205</sup> Kashmir Hill, ‘People You May Know:’ A Controversial Facebook Feature’s 10-Year History,  
19 Gizmodo (Aug. 8, 2018), <https://gizmodo.com/people-you-may-know-a-controversial-facebook-features-1827981959>.

20 <sup>206</sup> Will Oremus, *How Facebook Designed the Like Button—and made social media into a*  
21 *Popularity Contest*, Fast Company (Nov. 15, 2022), <https://www.fastcompany.com/90780140/the-inside-story-of-how-facebook-designed-the-like-button-and-made-social-media-into-a-popularity-contest>.

23 <sup>207</sup> Will Oremus, *How Facebook Designed the Like Button—and made social media into a*  
24 *Popularity Contest*, Fast Company (Nov. 15, 2022), <https://www.fastcompany.com/90780140/the-inside-story-of-how-facebook-designed-the-like-button-and-made-social-media-into-a-popularity-contest>.

26 <sup>208</sup> Will Oremus, *How Facebook Designed the Like Button—and made social media into a*  
27 *Popularity Contest*, Fast Company (Nov. 15, 2022), <https://www.fastcompany.com/90780140/the-inside-story-of-how-facebook-designed-the-like-button-and-made-social-media-into-a-popularity-contest>.

1 own behavior, as they were conditioned to act and interact in whatever ways would generate the like  
2 rewards, or risk having their content hidden from their friends' Newsfeeds.<sup>209</sup>

3 174. 2009 also marked the change from chronological to algorithmic ordering for the  
4 Newsfeed, with Meta now dictating which posts users would see by highlighting "Top Stories" in  
5 each user's Newsfeed.<sup>210</sup>

6 175. In December 2010, Meta began using facial recognition to identify people in users'  
7 Facebook photos and suggest that users tag them.<sup>211</sup> Rather than letting users opt-in to the feature,  
8 Meta automatically enabled it for all users.<sup>212</sup>

9 176. Meta also debuted infinite scrolling in 2010, initially for photos specifically, but later  
10 for its core Newsfeed, ensuring that users would never reach the bottom of a page and would,  
11 instead, keep scrolling without end or limits, leading to excessive and compulsive product use.<sup>213</sup>

12 177. In August 2012, Meta introduced the Facebook Messenger app, a feature that allowed  
13 users to see when their friends were last active on the product.<sup>214</sup>

14 \_\_\_\_\_  
15 <sup>209</sup> Will Oremus, *How Facebook Designed the Like Button—and made social media into a*  
16 *Popularity Contest*, Fast Company (Nov. 15, 2022), <https://www.fastcompany.com/90780140/the-inside-story-of-how-facebook-designed-the-like-button-and-made-social-media-into-a-popularity-contest>.

17 <sup>210</sup> Alex Hern, *Facebook to Restore Chronological Feed of Posts from Friends*, The Guardian  
18 (July 21, 2022), <https://www.theguardian.com/technology/2022/jul/21/facebook-to-restore-chronological-feed-of-posts-from-friends>.

19 <sup>211</sup> Ben Parr, *Facebook Brings Facial Recognition to Photo Tagging*, Mashable (Dec. 16, 2010),  
20 <http://www.cnn.com/2010/TECH/social.media/12/16/facebook.facial.recognition.mashable/index.html>.

21 <sup>212</sup> Charles Arthur, *Facebook In New Privacy Row Over Facial Recognition Feature*, The  
22 Guardian (June 8, 2011), <https://www.theguardian.com/technology/2011/jun/08/facebook-privacy-facial-recognition?INTCMP=SRCH>.

23 <sup>213</sup> Bob Leggit, *How the Internet Destroyed Your Attention Span*, Popzazzle (Apr. 30, 2021),  
24 <https://popzazzle.blogspot.com/2021/04/how-the-internet-destroyed-your-attention-span.html>.

25 <sup>214</sup> Billy Gallagher, *Facebook Brings Notifications, Album-Specific Uploads to Standalone*  
26 *Camera App*, Tech Crunch (Aug. 28, 2012), [https://techcrunch.com/2012/08/28/facebook-brings-notifications-album-specific-uploads-to-standalone-camera-app/?icid=tc\\_dan-schawbel\\_art&referrer=twitter](https://techcrunch.com/2012/08/28/facebook-brings-notifications-album-specific-uploads-to-standalone-camera-app/?icid=tc_dan-schawbel_art&referrer=twitter).

1 178. In August 2015, Meta launched Facebook Live, which allowed users to live-stream  
2 videos.<sup>215</sup> It immediately prompted more engagement with the platform and furthered Meta’s goal  
3 of keeping users coming back, both to create the videos and to interact with them.<sup>216</sup>

4 179. In February 2016, Meta expanded Facebook’s “Like” feature for posts, adding  
5 “Reactions” such as “like,” “love,” “haha,” “wow,” “sad,” and “angry.”<sup>217</sup> The following year,  
6 reactions were extended to comments.<sup>218</sup> In a manner similar to likes, these reactions further  
7 manipulated adolescents’ behavior, thus impacting their mental health and well-being and causing  
8 damage and harm to certain Plaintiffs herein.

9 180. In March 2017, following the launch of a similar product on Instagram, Meta  
10 introduced Facebook Stories, with the hope of competing with the success of Snapchat among young  
11 people.<sup>219</sup> With Stories, users could post short, ephemeral videos that appeared for 24-hours at the  
12 top of friends’ Newsfeeds.<sup>220</sup> Stories is designed to keep users coming back to the platform at least  
13 daily, feeding performance metrics that are crucial to Meta’s bottom line, or otherwise risk missing  
14 out.

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16  
17 <sup>215</sup> Joe Lazauskus, *The Untold Story of Facebook Live*, Fast Company (Sept. 29, 2016),  
<https://www.fastcompany.com/3064182/the-untold-story-of-facebook-live>.

18  
19 <sup>216</sup> Joe Lazauskus, *The Untold Story of Facebook Live*, Fast Company (Sept. 29, 2016),  
<https://www.fastcompany.com/3064182/the-untold-story-of-facebook-live>.

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21 <sup>217</sup> Casey Newton, *Facebook Rolls Out Expanded Like Button Reactions Around the World*, The  
22 Verge (Feb. 24, 2016), <https://www.theverge.com/2016/2/24/11094374/facebook-reactions-like-button>.

23  
24 <sup>218</sup> Natt Garun, *Facebook Reactions Have Now Infiltrated Comments*, The Verge (May 3, 2017),  
<https://www.theverge.com/2017/5/3/15536812/facebook-reactions-now-available-comments>.

25  
26 <sup>219</sup> Casey Newton, *Facebook Launches Stories to Complete its All-out Assault on Snapchat*, The  
27 Verge (Mar. 28, 2017), <https://www.theverge.com/2017/3/28/15081398/facebook-stories-snapchat-camera-direct>.

28 <sup>220</sup> Casey Newton, *Facebook Launches Stories to Complete its All-out Assault on Snapchat*, The  
Verge (Mar. 28, 2017), <https://www.theverge.com/2017/3/28/15081398/facebook-stories-snapchat-camera-direct>.

1 181. Later that year, in December 2017, Meta rolled out Facebook Kids, a messaging app  
2 designed for kid’s ages 6 to 12,<sup>221</sup> for the purpose of getting younger users on its product sooner.  
3 The app does not require a Facebook account, and instead allows children to create accounts that  
4 are managed through parents’ Facebook accounts.<sup>222</sup> Meta touted it as a way to “give[] parents more  
5 control.”<sup>223</sup> The app, however, still collects an extraordinary amount of data about its child users,  
6 including the content of their messages, any photos they send, and what features they use on the  
7 app.<sup>224</sup> Currently, there are no other official Facebook products marketed publicly by Meta as  
8 intended for children under 13 (despite the proliferation of such users on Instagram and Facebook).  
9 However, as of April 2021, Meta was actively seeking to develop ways for children as young as 6  
10 to use the product.<sup>225</sup>

11 182. In August 2020, Meta introduced “Reels” on Instagram.<sup>226</sup> Reels are short videos  
12 posted by other Instagram users, presented in an algorithmically generated feed, and in a full-screen  
13 format popularized by TikTok. Meta subsequently introduced Reels to Facebook in 2021.<sup>227</sup> As

14 \_\_\_\_\_  
15 <sup>221</sup> Nick Statt, *Facebook Launches a Version of Messenger for Young Children*, The Verge (Dec.  
16 4, 2017), [https://www.theverge.com/2017/12/4/16725494/facebook-messenger-kids-app-launch-  
ios-iphone-preview](https://www.theverge.com/2017/12/4/16725494/facebook-messenger-kids-app-launch-ios-iphone-preview).

17 <sup>222</sup> Nick Statt, *Facebook Launches a Version of Messenger for Young Children*, The Verge (Dec.  
18 4, 2017), [https://www.theverge.com/2017/12/4/16725494/facebook-messenger-kids-app-launch-  
ios-iphone-preview](https://www.theverge.com/2017/12/4/16725494/facebook-messenger-kids-app-launch-ios-iphone-preview).

19 <sup>223</sup> Loren Chang, *Introducing Messenger Kids, a New App for Families to Connect*, Meta (Dec. 4,  
20 2017), [https://about.fb.com/news/2017/12/introducing-messenger-kids-a-new-app-for-families-to-  
connect/](https://about.fb.com/news/2017/12/introducing-messenger-kids-a-new-app-for-families-to-connect/).

21 <sup>224</sup> Nitasha Tiku, *Facebook for 6-Year-Olds? Welcome to Messenger Kids*, Wired (Dec. 5, 2017),  
22 <https://www.wired.com/story/facebook-for-6-year-olds-welcome-to-messenger-kids/>.

23 <sup>225</sup> Ezra Kaplan and Jo Ling Kent, *Documents reveal Facebook targeted children as young as 6*  
24 *for consumer base*, NBC News (Oct. 29, 2021), [https://www.nbcnews.com/tech/social-  
media/facebook-documents-reveal-company-targeted-children-young-6-  
rcna4021?cid=sm\\_npd\\_nn\\_tw\\_ma](https://www.nbcnews.com/tech/social-media/facebook-documents-reveal-company-targeted-children-young-6-rcna4021?cid=sm_npd_nn_tw_ma).

26 <sup>226</sup> Instagram, *Introducing Instagram Reels* (Aug. 5, 2020),  
27 <https://about.fb.com/news/2020/08/introducing-instagram-reels/>.

28 <sup>227</sup> Facebook, *Launching Reels on Facebook in the US* (Sept. 29, 2021),

1 explained more fully below, Meta committed to making videos more and more a part of their  
2 platforms to attract and keep younger users in the face of competition from TikTok.

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

4 183. On or around April 6, 2012, Zuckerberg called Kevin Systrom, one of the co-  
5 founders of Instagram, offering to purchase his company.<sup>228</sup>

6 184. Instagram launched as a mobile-only app that allowed users to create, filter, and share  
7 photos. On the first day of its release in October 2010, it gained a staggering 25,000 users.<sup>229</sup> By  
8 April 2012, Instagram had approximately 27 million users. When Instagram released an Android  
9 version of its app—right around the time of Zuckerberg’s call—it was downloaded more than a  
10 million times in less than a day.<sup>230</sup> Instagram’s popularity is so widespread and image-based, a new  
11 term has grown up around it for the perfect image or place: “Instagrammable.”<sup>231</sup> Its users also use  
12 a variety of slang derived from the product, such as “IG”; “The Gram”; “Do it for the Gram”, a  
13 phrase used by a user performing a risky or unusual action to create attention seeking content;  
14 “Finsta,” a contraction of fun or fake Instagram used to refer to secondary accounts; among other  
15 slang.

16 185. On April 9, 2012, just days after Zuckerberg’s overture to Systrom, Facebook, Inc.  
17 purchased Instagram, Inc. for \$1 billion in cash and stock. This purchase price was double the  
18

19 <https://about.fb.com/news/2021/09/launching-reels-on-facebook-us/>.

20 <sup>228</sup> Nicholas Carlson, *Here’s The Chart That Scared Zuckerberg Into Spending \$1 Billion On*  
21 *Instagram*, Insider (Apr. 14, 2012), [https://www.businessinsider.com/heres-the-chart-that-scared-](https://www.businessinsider.com/heres-the-chart-that-scared-zuckerberg-into-spending-1-billion-on-instagram-2012-4)  
22 [zuckerberg-into-spending-1-billion-on-instagram-2012-4](https://www.businessinsider.com/heres-the-chart-that-scared-zuckerberg-into-spending-1-billion-on-instagram-2012-4).

23 <sup>229</sup> Dan Blystone, *Instagram: What It Is, Its History, and How the Popular App Works*,  
24 Investopedia (Oct. 22, 2022), [https://www.investopedia.com/articles/investing/102615/story-](https://www.investopedia.com/articles/investing/102615/story-instagram-rise-1-photo0sharing-app.asp#:~:text=History%20of%20Instagram)  
[instagram-rise-1-photo0sharing-app.asp#:~:text=History%20of%20Instagram](https://www.investopedia.com/articles/investing/102615/story-instagram-rise-1-photo0sharing-app.asp#:~:text=History%20of%20Instagram).

25 <sup>230</sup> Kim-Mai Cutler, *From 0 to \$1 billion in two years: Instagram’s rose-tinted ride to glory*  
26 TechCrunch (Apr. 9, 2012), [https://techcrunch.com/2012/04/09/instagram-story-facebook-](https://techcrunch.com/2012/04/09/instagram-story-facebook-acquisition/)  
[acquisition/](https://techcrunch.com/2012/04/09/instagram-story-facebook-acquisition/).

27 <sup>231</sup> Sarah Frier, *No Filter*, New York, Simon & Schuster (2020). [https://www.amazon.com/No-](https://www.amazon.com/No-Filter-Inside-Story-Instagram/dp/1982126809)  
28 [Filter-Inside-Story-Instagram/dp/1982126809](https://www.amazon.com/No-Filter-Inside-Story-Instagram/dp/1982126809)



1 valuation of Instagram implied by a round of funding the company closed days earlier.<sup>232</sup>

2 186. Facebook, Inc. held its initial public offering less than two months after acquiring  
3 Instagram, Inc.<sup>233</sup>

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

7 188. This was prescient. Instagram's revenue grew exponentially from 2015 to 2022.<sup>234</sup>  
8 A study conducted in the second quarter of 2018 showed that, over the prior year, advertisers'  
9 spending on Instagram grew by 177%—more than four times the growth of ad spending on  
10 Facebook.<sup>235</sup> Likewise, visits to Instagram rose by 236%, nearly *thirty* times the growth in site visits  
11 experienced by Facebook during the same period.<sup>236</sup> By 2021, Instagram accounted for over half of  
12 Meta's \$50.3 billion in net advertising revenues.<sup>237</sup>

13  
14  
15 <sup>232</sup> Alexia Tsotsis, *Right Before Acquisition, Instagram Closed \$50M At A \$500M Valuation From*  
16 *Sequoia, Thrive, Greylock And Benchmark*, TechCrunch (Apr. 9, 2012),  
17 <https://techcrunch.com/2012/04/09/right-before-acquisition-instagram-closed-50m-at-a-500m-valuation-from-sequoia-thrive-greylock-and-benchmark/>.

18 <sup>233</sup> Evelyn Rusli & Peter Eavis, *Facebook Raises \$16 Billion in I.P.O.*, N.Y. Times (May 17,  
19 2012), <https://archive.nytimes.com/dealbook.nytimes.com/2012/05/17/facebook-raises-16-billion-in-i-p-o/>.

20 <sup>234</sup> See Josh Constine, *Instagram Hits 1 Billion Monthly Users, Up From 800M in September*,  
21 TechCrunch (June 20, 2018), <https://techcrunch.com/2018/06/20/instagram-1-billion-users/>  
22 (showing meteoric rise in monthly active users over period and reporting year-over-year revenue increase of 70% from 2017-2018).

23 <sup>235</sup> Merkle, *Digital Marketing Report 3* (Q2 2018), [https://www.merkleinc.com/thought-](https://www.merkleinc.com/thought-leadership/digital-marketing-report/digital-marketing-report-q2-2018)  
24 [leadership/digital-marketing-report/digital-marketing-report-q2-2018](https://www.merkleinc.com/thought-leadership/digital-marketing-report/digital-marketing-report-q2-2018).

25 <sup>236</sup> Merkle, *Digital Marketing Report 19* (Q2 2018), [https://www.merkleinc.com/thought-](https://www.merkleinc.com/thought-leadership/digital-marketing-report/digital-marketing-report-q2-2018)  
26 [leadership/digital-marketing-report/digital-marketing-report-q2-2018](https://www.merkleinc.com/thought-leadership/digital-marketing-report/digital-marketing-report-q2-2018).

27 <sup>237</sup> Sara Lebow, *For the First Time, Instagram Contributes Over Half of Facebook's US Ad*  
28 *Revenues*, eMarketer (Nov. 2, 2021), [https://www.emarketer.com/content/instagram-contributes-](https://www.emarketer.com/content/instagram-contributes-over-half-of-facebook-us-ad-revenues)  
[over-half-of-facebook-us-ad-revenues](https://www.emarketer.com/content/instagram-contributes-over-half-of-facebook-us-ad-revenues).



1 189. Meta has claimed credit for Instagram’s success since its acquisition. Zuckerberg  
2 told market analysts that Instagram “wouldn’t be what it is without everything that we put into it,  
3 whether that’s the infrastructure or our advertising model.”<sup>238</sup>

4 190. Instagram has become the most popular photo-sharing social media product among  
5 teenagers and young adults in the United States. 62% of American teens use Instagram, with 10%  
6 of users reporting that they use it “almost constantly.”<sup>239</sup> Instagram’s young user base has become  
7 even more important to Meta as the number of teens using Facebook has decreased over time.<sup>240</sup>

8 191. Facebook’s and Instagram’s success, and the riches they have generated for Meta,  
9 have come at an unconscionable cost in human suffering. In September 2021, The Wall Street  
10 Journal began publishing internal documents leaked by former Facebook product manager Frances  
11 Haugen.<sup>241</sup>

12 192. The documents are disturbing. They reveal that, according to Meta’s researchers,  
13 13.5% of U.K. girls reported more frequent suicidal thoughts, and 17% of teen girls reported  
14 worsening eating disorders after starting to use Instagram.<sup>242</sup> Over 40% of Instagram users who

15 \_\_\_\_\_  
16 <sup>238</sup> Salvador Rodriguez, *Mark Zuckerberg Is Adamant that Instagram Should Not Be Broken Off*  
17 *from Facebook*, CNBC (Oct. 20, 2019), [https://www.cnbc.com/2019/10/30/mark-zuckerberg-is-](https://www.cnbc.com/2019/10/30/mark-zuckerberg-is-adamant-that-instagram-should-remain-with-facebook.html)  
[adamant-that-instagram-should-remain-with-facebook.html](https://www.cnbc.com/2019/10/30/mark-zuckerberg-is-adamant-that-instagram-should-remain-with-facebook.html).

18 <sup>239</sup> Emily Vogels et al., *Teens, Social Media and Technology 2022*, Pew Research. Ctr. (Aug. 10,  
19 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/)  
20 [2022/](https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/); see also Piper Sandler, *Taking Stock With Teens* 19 (Fall 2021),  
21 [https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-4424-8fb1-](https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-4424-8fb1-0e3adfcabd1d4.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top)  
[0e3adfcabd1d4.pdf?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=newsletter\\_axio-](https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-4424-8fb1-0e3adfcabd1d4.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top)  
[sam&stream=top](https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-4424-8fb1-0e3adfcabd1d4.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top) (eighty-one percent of teens use Instagram at least once a month).

22 <sup>240</sup> Sheera Frenkel et al., *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*,  
23 *N.Y. Times* (Oct. 26, 2021), available at  
24 <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>.

25 <sup>241</sup> The collection of Wall Street Journal articles are available online via the following link:  
26 <https://www.wsj.com/articles/the-facebook-files-11631713039?mod=bigtop-breadcrumb>.

27 <sup>242</sup> Morgan Keith, *Facebook’s Internal Research Found its Instagram Platform Contributes to*  
28 *Eating Disorders and Suicidal Thoughts in Teenage Girls, Whistleblower Says*, *Insider* (Oct. 3,  
2021), <https://www.businessinsider.com/facebook-knows-data-instagram-eating-disorders->

1 reported feeling “unattractive” said that feeling began while using Instagram,<sup>243</sup> and 32% of teen  
2 girls who already felt bad about their bodies felt even worse because of the app.<sup>244</sup>

3 193. Internal Meta presentations, from 2019 and 2020, were transparent in their  
4 conclusions about the harms caused by Instagram: “We make body image issues worse for one in  
5 three teen girls.” “Mental health outcomes related to this can be severe.” “Aspects of Instagram  
6 exacerbate each other to create a perfect storm.”<sup>245</sup>

7 194. Haugen’s revelations made clear to the public what Meta has long known: In an effort  
8 to addict kids and promote usage, Meta’s products exploit the neurobiology of developing brains,  
9 and all the insecurities, status anxieties, and beauty comparisons that come along with it. In a bid  
10 for higher profits, Meta ignored the harms resulting from its addiction-based business model, which  
11 are widespread, serious, long-term, and in tragic instances, fatal.

12 **d. Modifications of Instagram’s product features over time.**

13 195. In its earliest form, Instagram was a photo-sharing app. Users could post still  
14 images—enhanced by the product’s suite of built-in photo filters—“follow” other users, and “Like”  
15 or comment on posts by other users, all in a centralized chronological feed. Instagram also allowed

16 \_\_\_\_\_  
17 [suicidal-thoughts-whistleblower-2021-10.](https://www.wsj.com/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf)

18 <sup>243</sup> Georgia Wells, Jeff Horwitz, Deepa Seetharaman, *Facebook Knows Instagram is Toxic for*  
19 *Teen Girls, Company Documents Show*, Wall St. J. (Sept. 14, 2021),  
20 [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)  
21 [documents-show-11631620739](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739); Facebook Staff, *Teen Girls Body Image and Social Comparison*  
22 *on Instagram – An Exploratory Study in the U.S.* 9 (Mar. 26, 2020),  
23 [https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf)  
24 [instagram.pdf](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf).

25 <sup>244</sup> Billy Perrigo, *Instagram Makes Teen Girls Hate Themselves. Is That a Bug or a Feature?*,  
26 Time (Sept. 16, 2021), <https://time.com/6098771/instagram-body-image-teen-girls/>.

27 <sup>245</sup> Georgia Wells, Jeff Horwitz, Deepa Seetharaman, *Facebook Knows Instagram is Toxic for*  
28 *Teen Girls, Company Documents Show*, Wall St. J. (Sept. 14, 2021),  
[https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739)  
[documents-show-11631620739](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739); *Teen Girls Body Image and Social Comparison on Instagram –*  
*An Exploratory Study in the U.S.*, Wall St. J. (Sept. 29, 2021),  
[https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf)  
[instagram.pdf](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf).

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

3 196. In January 2011, Instagram added hashtags, which allowed users to group together  
4 posts about particular topics.<sup>246</sup>

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

7 198. In June 2013, in addition to the still, filtered images for which the product was  
8 known, Instagram began to support videos of up to 15 seconds.<sup>247</sup> This feature also included 13 new,  
9 specially created filters that could be applied to the videos. At the time, this feature satisfied what  
10 some characterized as the “years-long search for an ‘Instagram for video,’”<sup>248</sup> and allowed  
11 Instagram to compete with a popular video-sharing product at the time, Vine. It also allowed users  
12 posting videos to select their “favorite” scene from the video to be displayed as the cover image on  
13 video posts. According to Systrom, this ensured that user’s videos were “beautiful even when  
14 they’re not playing.”<sup>249</sup> Despite this, Instagram remained largely a photo-sharing app.

15 199. In December 2013, Meta added Instagram Direct, a feature that allows users to send  
16 messages or posts to specific people directly from the app.<sup>250</sup> This function allowed Instagram to  
17 compete against messaging products like Snapchat that were gaining popularity among teens and  
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19 <sup>246</sup> *Diving Deep into the Science of the Instagram Algorithm*, Signalytics,  
20 <https://about.fb.com/news/2020/08/introducing-instagram-reels/>.

21 <sup>247</sup> Colleen Taylor, *Instagram Launches 15-Second Video Sharing Feature, With 13 Filters And*  
22 *Editing*, Tech Crunch (June 20, 2013), [https://techcrunch.com/2013/06/20/facebook-instagram-](https://techcrunch.com/2013/06/20/facebook-instagram-video/)  
[video/](https://techcrunch.com/2013/06/20/facebook-instagram-video/).

23 <sup>248</sup> Colleen Taylor, *Instagram Launches 15-Second Video Sharing Feature, With 13 Filters And*  
24 *Editing*, Tech Crunch (June 20, 2013), [https://techcrunch.com/2013/06/20/facebook-instagram-](https://techcrunch.com/2013/06/20/facebook-instagram-video/)  
[video/](https://techcrunch.com/2013/06/20/facebook-instagram-video/).

25 <sup>249</sup> Kevin Systrom, *Introducing Video on Instagram*, Instagram (June 20, 2013),  
26 <https://about.instagram.com/blog/announcements/introducing-video-on-instagram>.

27 <sup>250</sup> Jordan Crook, *Instagram Introduces Instagram Direct*, Tech Crunch (Dec. 12, 2013),  
28 <https://techcrunch.com/2013/12/12/instagram-messaging/>.

1 pre-teens.

2 200. In June 2015, Meta opened Instagram to all advertisers, weaving advertisements into  
3 users' Feeds.<sup>251</sup>

4 201. In March 2016, Meta did away with Instagram's chronological feed and implemented  
5 engagement-based ranking algorithms.<sup>252</sup> Now, upon opening the app, users would no longer see  
6 posts from people they followed in the order they were posted; instead, they would encounter an  
7 algorithmic feed, like the one employed on Meta's other product, Facebook. At the time, Meta said  
8 that the new algorithmic feed would rank the order of posts in users' feeds based on the "likelihood  
9 that [they would] be interested in the content, [their] relationship with the person posting[,] and the  
10 timeliness of the post. . . ." <sup>253</sup>

11 202. In February 2016, with the popularity of video content rising on Instagram, Meta  
12 added view counts to videos, allowing users to see how many times users had viewed their posts.<sup>254</sup>  
13 Later that year, in December 2016, Instagram added the ability to "Like" comments to posts  
14 (symbolized by a heart emoji).<sup>255</sup> Both features became a source of additional motivation by users  
15 to seek social acceptance and validation.

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19 <sup>251</sup> Vindu Goel & Sydney Ember, *Instagram to Open its Photo Feed to Ads*, N.Y. Times (June 2,  
20 2015), <https://www.nytimes.com/2015/06/03/technology/instagram-to-announce-plans-to-expand-advertising.html>.

21 <sup>252</sup> Alex Heath, *Instagram is about to go through its most radical change ever*, Insider (Mar. 15,  
22 2016), <https://www.businessinsider.com/instagram-to-introduce-algorithmic-timeline-2016-3>.

23 <sup>253</sup> Alex Heath, *Instagram is about to go through its most radical change ever*, Insider (Mar. 15,  
24 2016), <https://www.businessinsider.com/instagram-to-introduce-algorithmic-timeline-2016-3>.

25 <sup>254</sup> Michael Zhang, *Instagram is Adding View Counts to Your Videos*, PetaPixel (Feb. 11, 2016),  
<https://petapixel.com/2016/02/11/instagram-adding-view-counts-videos/>.

26 <sup>255</sup> Hayley Tsukayama, *Instagram will soon let you like comments – or even turn them off*  
27 *completely*, Wash. Post (Dec. 6, 2016), <https://www.washingtonpost.com/news/the-switch/wp/2016/12/06/instagram-will-soon-let-you-like-comments-or-even-turn-them-off-completely/>.  
28

1           203. In August 2016, Meta introduced Instagram Stories,<sup>256</sup> another feature intended to  
2 compete against Snapchat for the youth market. Systrom has admitted that the feature was copied  
3 from a Snapchat feature popular with children called “Snapchat Stories.”<sup>257</sup> Later that year, in  
4 November 2016, Meta introduced Instagram Live,<sup>258</sup> designed to compete with both Snapchat’s  
5 ephemeral, disappearing posts, and the live-streamed videos of a then-popular product called  
6 Periscope. Live permitted users to live stream video, which disappeared as soon as the live stream  
7 stopped.

8           204. In December 2016, Meta introduced a product feature that allowed users to “save”  
9 posts from other users.<sup>259</sup> By tapping a bookmark icon underneath posts in their feeds, users could  
10 save posts for later, in a private tab that was viewable only to the saving user.

11           205. In April 2017, Meta introduced another feature with appeal to children, an offline  
12 mode that allows users to view posts and interact with Instagram even when they do not have access  
13 to an Internet connection,<sup>260</sup> for example when riding a bus to or from school.

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

17           207. In June 2018, at the same time it announced that Instagram had grown to one billion

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18 \_\_\_\_\_  
19 <sup>256</sup> Instagram, *Introducing Instagram Stories* (Aug. 2, 2016),  
20 [https://about.instagram.com/blog/announcements/introducing-instagram-  
21 stories#:~:text=Today%2C%20we're%20introducing%20Instagram,a%20slideshow%20format%3  
22 A%20your%20story.](https://about.instagram.com/blog/announcements/introducing-instagram-stories#:~:text=Today%2C%20we're%20introducing%20Instagram,a%20slideshow%20format%3A%20your%20story.)

23 <sup>257</sup> Rachel Kraus, *Instagram Founder Admits He Blatantly Stole Stories from Snapchat*, Mashable  
24 (Mar. 11, 2019), [https://www.nytimes.com/2021/10/16/technology/instagram-  
25 teens.html](https://www.nytimes.com/2021/10/16/technology/instagram-teens.html)<https://mashable.com/article/kevin-systrom-instagram-stories-snapchat>.

26 <sup>258</sup> Josh Constine, *Instagram launches disappearing Live video and messages*, Tech Crunch (Nov.  
27 21, 2016), <https://techcrunch.com/2016/11/21/instagram-live/>.

28 <sup>259</sup> Lisa Eadicicco, *Instagram Just Added a New Feature that Lets You Save Other Users’ Posts*,  
Time (Dec. 14, 2016), <https://time.com/4602063/instagram-new-update-features-2016/>.

<sup>260</sup> Josh Constine, *Instagram on Android gets offline mode*, Tech Crunch (Apr. 18, 2017),  
<https://techcrunch.com/2017/04/18/instagram-offline/>.

1 users, Meta introduced IGTV, both in the Instagram app and as a standalone product.<sup>261</sup> IGTV was  
2 intended to rival YouTube. IGTV allowed users to upload videos up to one-hour long.

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

6 209. Under Mosseri’s leadership, Instagram aggressively focused on acquiring and  
7 maximizing the engagement of young users. In 2018, Instagram allotted most of its global annual  
8 marketing budget to targeting 13-to 15-year-old children, a marketing demographic it calls “early  
9 high school.”<sup>262</sup> According to Meta, these users represent the platform’s “teen foothold” for its “US  
10 pipeline.”<sup>263</sup> “Youth and Teens are critically important to Instagram. While Instagram has strong  
11 market-fit with Teens, we know we need to constantly ‘re-win’ this segment.”<sup>264</sup> Meta has expressly  
12 sought to maximize metrics like “teen time spent” on the Instagram product.<sup>265</sup>

13 210. One way Meta sought to increase its teen metrics was through its launch of “Reels”  
14 in August 2020, which mimicked the format of videos on TikTok. As noted, Reels mirrors TikTok  
15 by algorithmically presenting short, “full-screen” videos posted by other Instagram users. Like  
16 TikTok, Reels counts and displays the number of likes, follows, comments, shares, and views of a  
17 video. The following year, Meta did away with IGTV, which had allowed longer videos to be posted  
18

19 <sup>261</sup> Kevin Systrom, *Welcome to IGTV, our New Video App*, Instagram (June 20, 2018),  
20 <https://about.instagram.com/blog/announcements/welcome-to-igtv>.

21 <sup>262</sup> Sheera Frenkel et al., *Instagram Struggles With Fears of Losing Its ‘Pipeline’: Young Users*,  
22 N.Y. Times (Oct. 16, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>.

23 <sup>263</sup> Sheera Frenkel et al., *Instagram Struggles With Fears of Losing Its ‘Pipeline’: Young Users*,  
24 N.Y. Times (Oct. 16, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>.

25 <sup>264</sup> META3047MDL-003-00030070 at META3047MDL-003-00030071.

26 <sup>265</sup> Sheera Frenkel et al., *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young*  
27 *Users*, N.Y. Times (Oct. 26, 2021), available  
28 at <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>.

1 by users in a more traditional format. In late July 2022, Mosseri announced that “more and more of  
2 Instagram is going to become video over time.”<sup>266</sup>

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

6 **2. Meta intentionally encourages youth to use its products and then**  
7 **leverages that usage to increase revenue.**

8 212. Facebook and Instagram owe their success to their defective design, including their  
9 underlying computer code and algorithms, and to Meta’s failure to warn Plaintiffs and Consortium  
10 Plaintiffs that the products present serious safety risks. Meta’s tortious conduct begins before a user  
11 has viewed, let alone posted, any content.

12 213. Meta describes the Instagram product as a “mobile-first experience.”<sup>267</sup> Indeed, the  
13 great majority of Instagram users in the U.S. access Instagram through a mobile application for  
14 either the iOS or Android operating systems.

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

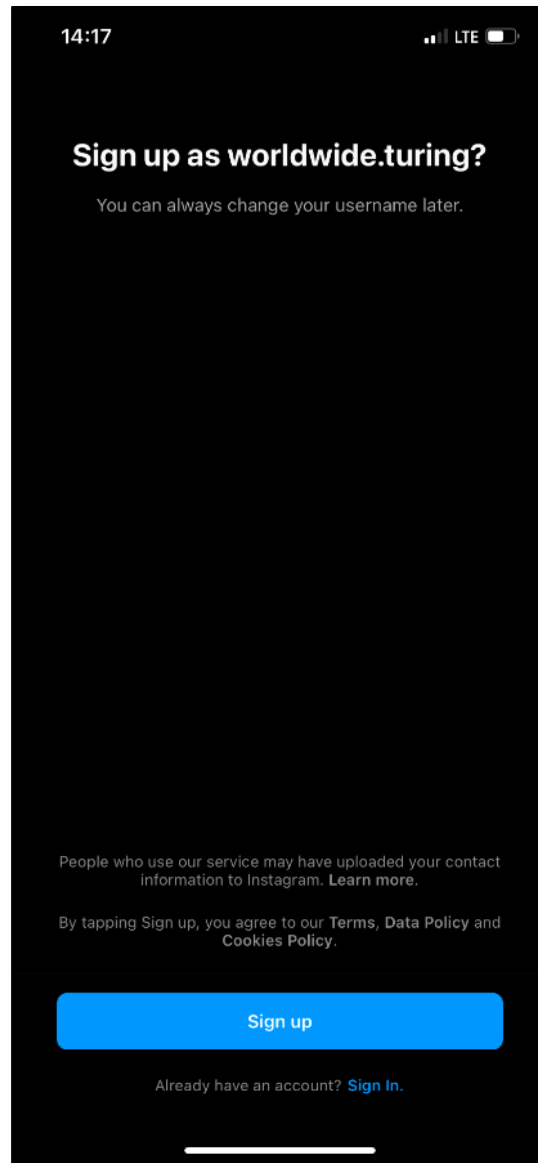
20 215. A prospective Instagram or Facebook user is then invited to press a colorful “Sign  
21 up” button. In small print above this button, the user is informed: “By tapping Sign up, you agree  
22 to our Terms, Data Policy and Cookies Policy.” The text of those policies is not presented on the  
23 sign-up page. While the words “Terms,” “Data Policy,” and “Cookies Policy” are slightly bolded,

24 <sup>266</sup> Marisa Dellatto, *Instagram Exec Defends Shift to Video Despite Complaints from Creators like*  
25 *Kylie Jenner*, *Forbes* (July 26, 2022),  
26 <https://www.forbes.com/sites/marisadellatto/2022/07/26/instagram-exec-defends-shift-to-video-despite-complaints-from-creators-like-kylie-jenner/?sh=4099badd5c6e>.

27 <sup>267</sup> Yorgos Askalidis, *Launching Instagram Messaging on Desktop*, *Instagram* (Sept. 25, 2020),  
28 <https://about.instagram.com/blog/engineering/launching-instagram-messaging-on-desktop>.



1 the user is not informed that they can or should click on them, or otherwise told how they can access  
2 the policies.



22 216. Meta’s Data Policy (rebranded as a “Privacy Policy” in 2022), which applies to a  
23 range of Meta apps, including Facebook and Instagram,<sup>268</sup> indicates Meta collects a breathtaking  
24 amount of data from the users of its products, including:

- 25 a. “[c]ontent that you create, such as posts, comments or audio”;

27 <sup>268</sup> Meta, *Privacy Policy*, Meta (Jan. 1 2023),  
28 <https://mbasic.facebook.com/privacy/policy/printable/#annotation-1>.



- 1           b.     “[c]ontent you provide through our camera feature or your camera roll  
2           settings, or through our voice-enabled features”;
- 3           c.     “[I]nformation you've shared with us through device settings, such as GPS  
4           location, camera access, photos and related metadata”;
- 5           d.     “[m]essages that you send and receive, including their content”;
- 6           e.     “Metadata about content and messages”;
- 7           f.     “[t]ypes of content that you view or interact with, and how you interact with  
8           it”;
- 9           g.     “[t]he time, frequency and duration of your activities on our products”;
- 10          h.     “your contacts' information, such as their name and email address or phone  
11          number, if you choose to upload or import it from a device, such as by syncing  
12          an address book”;
- 13          i.     information about “What you're doing on your device (such as whether our  
14          app is in the foreground or if your mouse is moving)”;
- 15          j.     “device signals from different operating systems,” including “things such as  
16          nearby Bluetooth or Wi-Fi connections”;
- 17          k.     “[i]nformation about the network that you connect your device to,” which  
18          includes “The name of your mobile operator or Internet service provider  
19          (ISP), Language, Time zone, Mobile phone number, IP address, Connection  
20          speed, Information about other devices that are nearby or on your network,  
21          Wi-Fi hotspots you connect to using our products”; and
- 22          l.     “information from . . . third parties, including . . . [m]arketing and advertising  
23          vendors and data providers, who have the rights to provide us with your  
24          information.”

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

1           218. The Data Policy presents those goals as benign and even positive for its users—“ to  
2 provide a personalized experience to you” and to “make suggestions for you such as people you  
3 may know, groups or events that you may be interested in or topics that you may want to follow.”

4           219. The Data Policy does not inform users, and did not inform Plaintiffs, that the more  
5 time individuals spend using Facebook and Instagram, the more ads Meta can deliver and the more  
6 money it can make; or that the more time users spend on Facebook and Instagram, the more Meta  
7 learns about them, and the more it can sell to advertisers the ability to micro-target highly  
8 personalized ads.<sup>269</sup>

9           220. Meta monetizes its users and their data by selling ad placements to marketers. Meta  
10 generated \$69.7 billion from advertising in 2019, more than 98% of its total revenue for the year.<sup>270</sup>

11           221. Given its business model, Meta has every incentive to—and knowingly does—addict  
12 users to Facebook and Instagram. It accomplishes this through the algorithms that power its apps,  
13 which are designed to induce compulsive and continuous scrolling for hours on end, operating in  
14 conjunction with the other defective features described throughout this Complaint.<sup>271</sup>

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15  
16 <sup>269</sup> Nor does it inform users that Meta has allowed third-party apps to harvest from Facebook “vast  
17 quantities of highly sensitive user and friends permissions.” *In re Facebook, Inc.*, No. 18-md-  
18 02843-VC, ECF No. 1104 at 9 (N.D. Cal. Feb. 9, 2023). This has included an app called Sync.Me,  
19 which—according to Meta’s internal investigative documents—“had access to many  
20 ‘heavyweight’ permissions,” “including the user’s entire newsfeed, friends’ likes, friends’ statuses,  
21 and friends’ hometowns.” *In re Facebook, Inc.*, No. 18-md-02843-VC, ECF No. 1104 at 9 (N.D.  
22 Cal. Feb. 9, 2023). It has included Microstrategy, Inc., which accessed data from “16 to 20  
23 million” Facebook users, despite only being installed by 50,000 people. *In re Facebook, Inc.*, No.  
24 18-md-02843-VC, ECF No. 1104 at 9 (N.D. Cal. Feb. 9, 2023). And it has included one Yahoo  
25 app that made “billions of requests” for Facebook user information, including “personal  
26 information about those users’ friends, including the friends’ education histories, work histories,  
27 religions, politics, ‘about me’ sections, relationship details, and check-in posts.” *In re Facebook,*  
28 *Inc.*, No. 18-md-02843-VC, ECF No. 1104 at 9-10 (N.D. Cal. Feb. 9, 2023).

<sup>270</sup> Rishi Iyengar, *Here’s How Big Facebook’s Ad Business Really Is*, CNN (July 1, 2020),  
<https://www.cnn.com/2020/06/30/tech/facebook-ad-business-boycott>.

<sup>271</sup> See Christian Montag, et al., *Addictive Features of Social Media/Messenger Platforms and  
Freemium Games against the Background of Psychological and Economic Theories*, 16 Int’l J.  
Env’t Rsch. and Pub. Health 2612, 5 (July 16, 2019),  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6679162/> (“One technique used to prolong usage  
time in this context is the endless scrolling/streaming feature.”); see generally, Ludmila Lupinacci,

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

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

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

25  
26 \_\_\_\_\_  
27 ‘Absentmindedly scrolling through nothing’: liveness and compulsory continuous connectedness  
28 in social media, 43 *Media, Culture & Soc’y* 273 (2021),  
<https://journals.sagepub.com/doi/epdf/10.1177/0163443720939454> (describing the ways that users  
use and experience social media apps).

1           225. Meta’s collection and analysis of user data allows it to assemble virtual dossiers on  
2 its users, covering hundreds if not thousands of user-specific data segments. This, in turn, allows  
3 advertisers to micro-target marketing and advertising dollars to very specific categories of users,  
4 who can be segregated into pools or lists using Meta’s data segments. Only a fraction of these data  
5 segments come from content knowingly designated by users for publication or explicitly provided  
6 by users in their account profiles. Many of these data segments are collected by Meta through covert  
7 surveillance of each user’s activity while using the product and when logged off the product,  
8 including behavioral surveillance that users are unaware of, like navigation paths, watch time, and  
9 hover time. As Meta’s user database grows, it leverages that data to manipulate users into spending  
10 more time on the products. As users spend more time on the products, the more detailed information  
11 Meta can extract. The more detailed information Meta can extract from users, the more money it  
12 makes.

13           226. Currently, advertisers can target Instagram and Facebook ads to young people based  
14 on age, gender, and location.<sup>272</sup> According to U.S.-based non-profit Fairplay, Meta did not actually  
15 cease collecting data from teens for advertising in July 2021, as Meta has claimed.<sup>273</sup>

16           227. Meta clearly understands the revenue and growth potential presented by its youngest  
17 users, and it is desperate to retain them. Documents obtained by *The New York Times* indicate that,  
18 since 2018, almost all Instagram’s \$390 million global marketing budget has gone towards showing  
19 ads to teenagers.<sup>274</sup>

22 <sup>272</sup> Andrea Vittorio, *Meta’s Ad-Targeting to Teens Draws Advocacy Group Opposition*,  
23 Bloomberg (Nov. 16, 2021), <https://news.bloomberglaw.com/privacy-and-data-security/metas-ad-targeting-to-teens-draws-advocacy-group-opposition>.

24 <sup>273</sup> Andrea Vittorio, *Meta’s Ad-Targeting to Teens Draws Advocacy Group Opposition*,  
25 Bloomberg (Nov. 16, 2021), <https://news.bloomberglaw.com/privacy-and-data-security/metas-ad-targeting-to-teens-draws-advocacy-group-opposition>.

27 <sup>274</sup> Sheera Frenkel, et al, *Instagram Struggles With Fears of Losing Its ‘Pipeline’: Young Users*  
28 N.Y. Times (Oct. 16, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>.

1           228. Before the rise of Instagram, Facebook was the social media product by which Meta  
2 targeted young users. Until recently, this targeting was devastatingly effective. In January 2014,  
3 90% of U.S. teens used Facebook monthly; as late as January 2016, 68% did.<sup>275</sup>

4           229. While the number of teen Facebook users has declined in recent years, Facebook  
5 remains critical to Meta’s strategy towards young users. Meta views Facebook as the nexus of teen  
6 users’ lives on social media, “where all social circles intersect,” and as filling a similar role for such  
7 users as the career-focused social media product LinkedIn fills for adults.<sup>276</sup> According to the  
8 summary of a 2018 meeting, Meta’s expressed goal was to have users “move through” Meta’s  
9 products “as they grow, i.e. Messenger Kids → Instagram → Facebook.”<sup>277</sup>

10           230. To create this cycle, Meta embarked on a “major investment in youth,” researching  
11 and pursuing products targeted at kids as young as six.<sup>278</sup> The centerpiece of these efforts is  
12 Messenger Kids (“MK”).<sup>279</sup> In 2019, Meta conducted at least two research projects on growing MK.  
13 One study explored how to use “Playdates as a Growth Lever for Messenger Kids.”<sup>280</sup> During this  
14 study, Meta sought to understand better how playdates might be an area to increase usage among  
15 kids by interviewing parents of active users and the young users themselves.<sup>281</sup> Investigators  
16 suggested there was an opportunity to “brainstorm features and/or prompts encouraging use of the  
17 app, before and after playdates, to improve retention and active threads.”<sup>282</sup> Later that year, they

18 \_\_\_\_\_  
19 <sup>275</sup> META3047MDL-003-00171899 at META3047MDL-003-00171904.

20 <sup>276</sup> META3047MDL-003-00171899 at META3047MDL-003-00171909.

21 <sup>277</sup> META3047MDL-003-00003731 at META3047MDL-003-00003732.

22 <sup>278</sup> Haugen\_00017238 at Haugen\_00017238.

23 <sup>279</sup> Nick Stat, *Facebook launches a version of Messenger for young children*, The Verge  
24 (December 4, 2022) [https://www.theverge.com/2017/12/4/16725494/facebook-messenger-kids-  
app-launch-ios-iphone-preview](https://www.theverge.com/2017/12/4/16725494/facebook-messenger-kids-app-launch-ios-iphone-preview).

25 <sup>280</sup> Haugen\_00023087 at Haugen\_00023087.

26 <sup>281</sup> Haugen\_00023087 at Haugen\_00023088, Haugen\_00023097.

27 <sup>282</sup> Haugen\_00023087 at Haugen\_00023090.

1 released a finding from a second investigation of parents and children who used MK and those who  
2 did not.<sup>283</sup> To drive MK growth, the study recommended “encourag[ing] more K2K [kid-to-kid]  
3 connections in MK” by “surfac[ing] and develop[ing] additional in-app activities that involve  
4 others,” while emphasizing to parents the “play-based messaging” and the “play aspect of MK—  
5 camera filters, games, filters via notifs and QPs.”<sup>284</sup> These are many of the same defective features  
6 found in Instagram.

7         231. Meta was also eager to market its products to tweens—users aged 10-12. Although  
8 Meta employees publicly denied using children as “guinea pigs” to develop product features,  
9 internally Meta was intensely interested in children’s use of their apps.<sup>285</sup> It conducted research  
10 projects, with titles such as “Tweens JTBD Survey”<sup>286</sup> and “Exploring Tweens Social Media  
11 Habits.”<sup>287</sup> In the latter study, Meta compared tween perceptions of their competitors’ products to  
12 understand “tween product needs,”<sup>288</sup> noting that tweens can “connect and have fun using existing  
13 apps, even though they’re not made with a 10-to-12-year-old in mind.”<sup>289</sup> Meta’s takeaway was to  
14 “use entertainment/interest as a starting point for engagement” and to “highlight fitting in.”<sup>290</sup>

15  
16  
17  
18 <sup>283</sup> Haugen\_00023066 at Haugen\_00023066.

19 <sup>284</sup> Haugen\_00023066 at Haugen\_00023085.

20 <sup>285</sup> John Twomey, *Molly Russell Inquest Latest: Teenager Viewed Suicide Videos of ‘Most*  
21 *Distressing Nature’*, Express (Sept. 23, 2022),  
22 [https://www.express.co.uk/news/uk/1673461/Molly-Russell-inquest-latest-Teenager-suicide-](https://www.express.co.uk/news/uk/1673461/Molly-Russell-inquest-latest-Teenager-suicide-videos-instagram)  
[videos-instagram](https://www.express.co.uk/news/uk/1673461/Molly-Russell-inquest-latest-Teenager-suicide-videos-instagram).

23 <sup>286</sup> “JTBD” appears to stand for “Jobs to Be Done.” Haugen\_00024450 at Haugen\_00024454.

24 <sup>287</sup> Haugen\_00023849 at Haugen\_00023850.

25 <sup>288</sup> Haugen\_00023849 at Haugen\_00023888.

26 <sup>289</sup> Haugen\_00023849 at Haugen\_00023886.

27 <sup>290</sup> Haugen\_00023849 at Haugen\_00023888.

1           232. In 2019, Meta conducted a series of interviews in Los Angeles and Denver with  
2 tween friend groups, friend pairs, and individuals.<sup>291</sup> Meta used this research to craft “product  
3 recommendations” to appeal to tweens, suggesting features to help “decrease friction in the digital  
4 interaction funnel.”<sup>292</sup> The recommendations included developing ways to “provide automatic  
5 signals that indicate whether friends are available to interact,” “[e]nable tweens to instrumentally  
6 signal their availability,” “[p]rovide light conversations starters that tweens can use to test the  
7 reciprocity of an interaction (e.g., poking, waves),” and “build in a way that enables quick  
8 communication across all messaging modalities.”<sup>293</sup>

9           233. Meta’s interest, efforts, and success in expanding the presence of its products in  
10 children’s lives is clear. Given the delicate, developing nature of the young brain and Meta’s creation  
11 of social media products designed to promote repetitive, compulsive use, it is not surprising that  
12 American society is now grappling with the ramifications of Meta’s growth-at-any-cost approach.  
13 In a candid moment, a Software Engineer at Meta, admitted, “It’s not a secret that we’ve often  
14 resorted to aggressive tactics in the name of growth, and we’ve been pretty unapologetic about it.”<sup>294</sup>

15           234. Meta has studied features and designs from its other products to make Instagram as  
16 attractive and addictive as possible to young users. Meta’s flagship product Facebook was the  
17 original testing ground for many of Instagram’s addictive and otherwise defective features, which  
18 the two products share to this day. This feature overlap is no accident: it represents a conscious  
19 strategy adopted by Meta to keep social media users hooked on its “family” of products for their  
20 entire lives.

21           235. From the beginning, both the Facebook and Instagram products have exploited  
22 vulnerabilities in human psychology to addict users and maximize user time and engagement.

23 \_\_\_\_\_  
24 <sup>291</sup> Haugen\_00024450 at Haugen\_00024450.

25 <sup>292</sup> Haugen\_00024450 at Haugen\_00024466.

26 <sup>293</sup> Haugen\_00024450 at Haugen\_00024466.

27 <sup>294</sup> Haugen\_00000934 at Haugen\_00000934.

1 Facebook’s first President, Sean Parker, summed up the devastating impact of this product design  
2 in a 2017 interview:

3 God only knows what it's doing to our children’s brains. . . . The  
4 thought process that went into building these applications, Facebook  
5 being the first of them, . . . was all about: ‘How do we consume as  
6 much of your time and conscious attention as possible?’ . . . And that  
7 means that we need to sort of give you a little dopamine hit every once  
8 in a while, because someone liked or commented on a photo or a post  
9 . . . . And that’s going to get you to contribute more content, and that’s  
10 going to get you . . . more likes and comments. . . . It’s a social-  
11 validation feedback loop . . . exactly the kind of thing that a hacker  
12 like myself would come up with, because you’re exploiting a  
13 vulnerability in human psychology. . . . The inventors, creators — it’s  
14 me, it’s Mark [Zuckerberg], it’s Kevin Systrom on Instagram, it’s all  
15 of these people — understood this consciously. And we did it  
16 anyway.<sup>295</sup>

17 Tellingly, many tech leaders, including individuals with inside knowledge of the defects of Meta’s  
18 social media products, either ban or severely limit their own children’s access to screen time and  
19 social media.<sup>296</sup> Such leaders in the field include Tim Cook and former Facebook executives Tim  
20 Kendall and Chamath Palihapitiya.<sup>297</sup>

21 <sup>295</sup> Mike Allen, *Sean Parker unloads on Facebook: “God only knows what it’s doing to our  
22 children’s brains,”* Axios (Nov. 9, 2017), <https://www.axios.com/2017/12/15/sean-parker-unloads-on-facebook-god-only-knows-what-its-doing-to-our-childrens-brains-1513306792>.

23 <sup>296</sup> Samuel Gibbs, *Apple’s Tim Cook: “I Don’t Want My Nephew on a Social Network”*, The  
24 Guardian (Jan. 19, 2018), <https://www.theguardian.com/technology/2018/jan/19/tim-cook-i-dont-want-my-nephew-on-a-social-network#:~:text=The%20head%20of%20Apple%2C%20Tim,it%20was%20announced%20on%20Friday>; James Vincent, *Former Facebook Exec Says Social Media is Ripping Apart Society*, The  
25 Verge (Dec. 11, 2017), <https://www.theverge.com/2017/12/11/16761016/former-facebook-exec-ripping-apart-society>.

26 <sup>297</sup> Samuel Gibbs, *Apple’s Tim Cook: “I Don’t Want My Nephew on a Social Network”*, The  
27 Guardian (Jan. 19, 2018), <https://www.theguardian.com/technology/2018/jan/19/tim-cook-i-dont-want-my-nephew-on-a-social-network#:~:text=The%20head%20of%20Apple%2C%20Tim,it%20was%20announced%20on%20Friday>; James Vincent, *Former Facebook Exec Says Social Media is Ripping Apart Society*, The  
28 Verge (Dec. 11, 2017), <https://www.theverge.com/2017/12/11/16761016/former-facebook-exec-ripping-apart-society>.



1                   **3.     Meta intentionally designed product features to addict children and**  
2                   **adolescents.**

3                   236.     Meta designed Facebook and Instagram with harmful defects that users encounter at  
4 every stage of interaction with the product. These defects, which have harmed Plaintiffs and other  
5 adolescents that use the products, include, but are not limited to: (a) recommendation algorithms,  
6 fueled by extensive data collection, which are designed to promote use in quantities and frequency  
7 harmful to adolescents; (b) product features that prey upon children’s desire for validation and need  
8 for social comparison; (c) product features that are designed to create harmful loops of repetitive  
9 and excessive product usage; (d) lack of effective age-verification mechanisms, despite having the  
10 ability to implement them; (d) inadequate parental controls, and facilitation of unsupervised use of  
11 the products; and (e) intentionally placed obstacles to discourage cessation of use of the products.

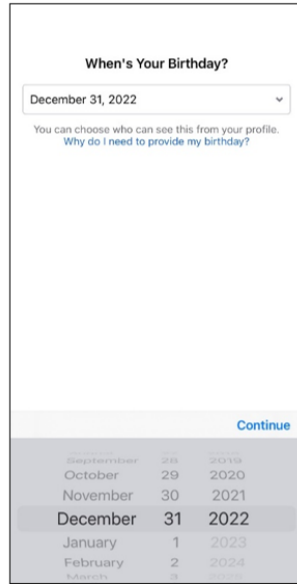
12                  237.     Facebook and Instagram have been designed, maintained, and constantly updated by  
13 one of the world’s most wealthy, powerful, and sophisticated corporations. Large teams of expert  
14 data scientists, user experience (“UX”) researchers, and similar professionals have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

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

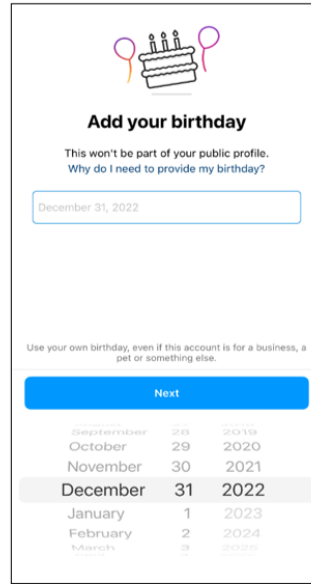
25                  238.     Children of all ages can use and become addicted to Meta’s products without any  
26 effective safeguard or process prior to entry. Yet children are most vulnerable to the negative  
27 impacts of Facebook and Instagram.

28                  239.     Meta purports to ban children under the age of 13 from using their products but, at  
all relevant times, has lacked any reliable form of age verification to prevent underage users from

1 using their products. Even now, over a year after Frances Haugen testified before Congress  
2 regarding the harm Meta knowingly causes to minors, users are only asked to self-report their  
3 birthday when signing up for a Facebook or Instagram account:

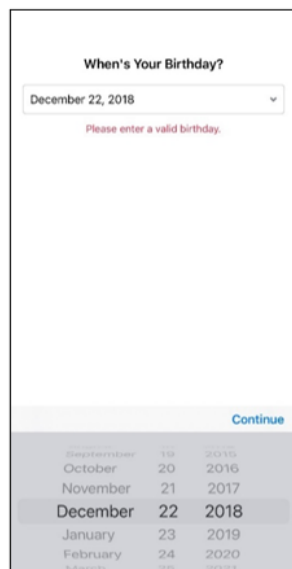


(Facebook, January 2023)

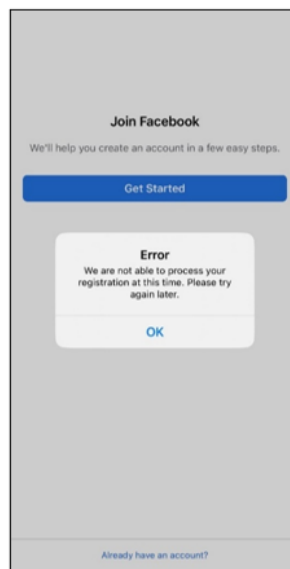


(Instagram, January 2023)

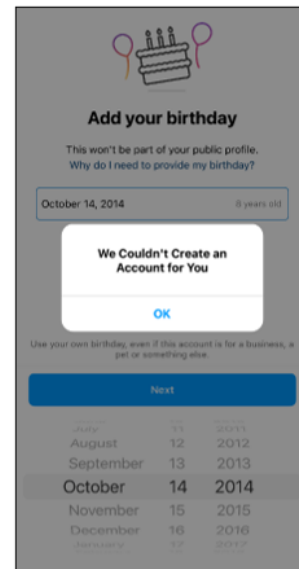
15 240. If users report a birthday indicating they are less than 13 years old, the products  
16 redirect them to the messages below:



(Facebook, January 2023)



(Facebook, January 2023)



(Instagram, January 2023)

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

9           242. Meta chooses not to universally utilize available, effective, and reliable age  
10 verification methods and systems used by many companies across the internet.<sup>298</sup> Indeed, Meta has  
11 jettisoned age-related safeguards that were initially present on the Facebook product to increase its  
12 user numbers, thereby increasing its profit, to the detriment of children.

13           243. Other online products employ substantially more effective and reliable age  
14 verification schemes before granting children access. These include, but are not limited to,  
15 connecting new users to parents’ accounts, credit card verification, verification by presentation of  
16 an identification card (or other government-issued document), or linking a verified undergraduate  
17 or professional email, among other methods. Meta chooses not to implement any of these systems,  
18 even though they are technologically feasible, used by many companies across the Internet, and  
19 could be employed at relatively low cost. Indeed, Meta itself uses an age verification technique for  
20 its Facebook Dating product that it claims can verify ages without identifying users—but does not  
21 use the same technology at account startup for Facebook or Instagram.<sup>299</sup>

22           244. For most of its history, Meta knew that children under the age of 13 were using its  
23

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24 <sup>298</sup> Other age verification methods used across the internet include: credit card verification, ID  
25 card verification (or other government identity documents), face recognition, connection to  
26 parents’ accounts, linking a verified undergraduate or professional email, among other methods.

27 <sup>299</sup> Erica Finkle, Meta Director of Data Governance, *Bringing Age Verification to Facebook*  
28 *Dating*, Meta (Dec. 5, 2022), <https://about.fb.com/news/2022/12/facebook-dating-age-verification/>.  
<https://about.fb.com/news/2022/12/facebook-dating-age-verification/>.

1 apps. This was clearly evidenced by posted photos of elementary school age users. Yet Meta  
2 continued to promote and usher Facebook and Instagram to children. As long as a new user simply  
3 clicked a box confirming that they were at least 13 years old, Meta asked no questions, engaged in  
4 zero follow-up, and let the user access the products indefinitely. This did not go unnoticed by certain  
5 of its employees who criticized the company’s policy: “[I]f we collected age on IG we could age-  
6 gate this content [referring to suicide and self-injury (“SSI”) content] . . . and if we used age  
7 classifiers we could detect under 13s and kick them off the platform so they wouldn’t have access  
8 to content that’s not appropriate for them to find.”<sup>300</sup>

9         245. Indeed, Meta did not ask for the age of new Instagram users until December 2019,  
10 after Instagram had been on the market for more than seven years.<sup>301</sup> Even then, Meta did not ask  
11 *existing* users to disclose their ages, effectively grandfathering in underage users. Indeed, an internal  
12 document confirms that, in April 2020, Meta had an age for only approximately 55% of its users,<sup>302</sup>  
13 which Meta did not attempt to correct until August 30, 2021. Meta did not begin requiring age  
14 verification for users who attempt to change their age from under to over 18 until 2022.<sup>303</sup>

15         246. There can be no serious debate about whether Meta has more effective age  
16 verification tools at its disposal. Meta has internal age identification models, such as the  
17 “teen\_non\_teen” model or the “dim\_ig\_age\_prediction\_adult\_classifier,” that can estimate a user’s  
18  
19

20 \_\_\_\_\_  
<sup>300</sup> META3047MDL-003-00086015 at META3047MDL-003-00086015.

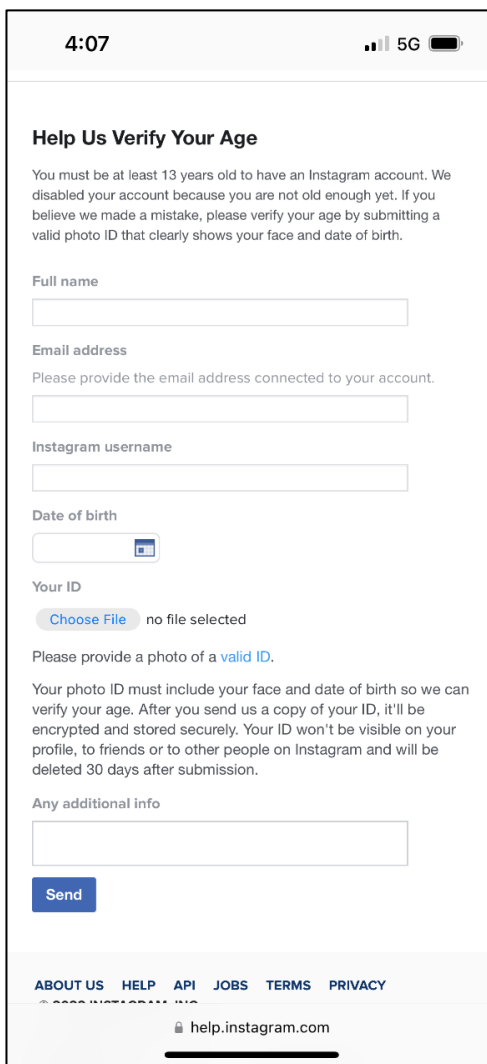
21  
22 <sup>301</sup> META3047MDL-003-00157020 at META3047MDL-003-00157020 (“[W]e have very limited  
age information on IG (we only started collecting age in December at registration)”).

23 <sup>302</sup> META3047MDL-003-00042548 at META3047MDL-003-00042551- META3047MDL-003-  
24 00042552.

25 <sup>303</sup> Instagram, *Introducing New Ways to Verify Age on Instagram*, Meta (June 23, 2022),  
26 <https://about.fb.com/news/2022/06/new-ways-to-verify-age-on-instagram/>. Meta explained the  
27 choice of age by saying that they provide users under 18 with an experience that is appropriate for  
28 their age, including “preventing unwanted contact from adults they don’t know.” However, as  
described below, each week hundreds of thousands of children are inappropriately contacted by  
adults on Instagram.

1 age.<sup>304</sup> Although this tool could be used to identify when a user is under 13 (or, for that matter, if a  
2 user is a teenager and should therefore be safeguarded from particularly injurious aspects of Meta’s  
3 products) Meta does not use this safeguard.<sup>305</sup>

4 247. Perversely, Meta does employ age verification on Instagram—but only when a user  
5 self-reports they are *younger* than 13. In that case, Meta provides a user with what amounts to an  
6 appeal right: “if you believe we made a mistake, please verify your age by submitting a valid photo



24 <sup>304</sup> Haugen\_00003463, at Haugen\_00003463- Haugen\_00003465; see also Ibrahim Mousa Al-  
25 Zaubi, Assef Jafar, & Kadan Aljoumaa, *Predicting customer’s gender and age depending on*  
26 *mobile phone data*, 6 *Journal of Big Data* 18 (Feb 19, 2029),  
27 <https://journalofbigdata.springeropen.com/articles/10.1186/s40537-019-0180-9> (discussing  
generally how a similar age prediction algorithm works).

28 <sup>305</sup> Haugen\_00003463, at Haugen\_00003463-Haugen\_00003465.

1 ID that clearly shows your face and date of birth.”

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

6 249. Similarly, Meta imposes unnecessary barriers to the removal of accounts created by  
7 children under 13. Since at least April 2018, Instagram and Facebook both accept reports of accounts  
8 created by children under 13.<sup>306</sup> However, before an Instagram or Facebook account is deleted, Meta  
9 requires verification that the child is under the age of 13. For example, Instagram’s reporting page  
10 states:

11 If you’re reporting a child’s account that was made with a false date  
12 of birth, and the child’s age can be reasonably verified as under 13,  
13 we’ll delete the account. You will not get confirmation that the  
14 account has been deleted, but you should no longer be able to view it  
15 on Instagram. Keep in mind that complete and detailed reports  
(example: providing the username of the account you’re reporting)  
help us take appropriate action. If the reported child’s age can’t  
reasonably be *verified as under 13*, then we may not be able to take  
action on the account.<sup>307</sup>

16 Facebook’s reporting page contains almost identical language.<sup>308</sup> By choosing to implement age  
17 verification only before deleting accounts of users suspected to be children, but not when those  
18 accounts are first created, Meta makes it more difficult to prove a user is under age 13 than it does  
19 for a minor to pretend to be over 13.

20

21

22 <sup>306</sup> *Report an Underage User on Instagram*, Instagram,  
23 <https://help.instagram.com/contact/723586364339719?fbclid=IwAR3E5rZo8zvp9Uw3giRoQRMy5qFmIGpy-NOLLtpctHOwkalXtfJ1ft9O09Q>; *Report an Underage Child*, Facebook,  
24 <https://www.facebook.com/help/contact/209046679279097>

25 <sup>307</sup> *Report an Underage User on Instagram*, Instagram,  
26 <https://help.instagram.com/contact/723586364339719?fbclid=IwAR3E5rZo8zvp9Uw3giRoQRMy5qFmIGpy-NOLLtpctHOwkalXtfJ1ft9O09Q>. *Supra* note 325. (emphasis added).

27 <sup>308</sup> *Reporting an Underage Child*, Facebook,  
28 <https://www.facebook.com/help/contact/209046679279097>.

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

4           251. Zuckerberg has stated that he believes children under 13 should be allowed on  
5 Facebook,<sup>309</sup> so Meta’s lax approach to age verification appears to reflect true company policy.

6           252. Meta’s approach to underage users has consistently been one of feigned ignorance.  
7 On October 10, 2021, Senator Marsha Blackburn reported that a young celebrity told Instagram  
8 CEO Adam Mosseri that she had been active on Instagram since she was eight. Mosseri replied that  
9 he “didn’t want to know that.”<sup>310</sup>

10           253. But Meta *does* know that its age-verification protocols are inadequate to keep minors  
11 off Facebook and Instagram. According to a May 2011 ABC News report, “about 7.5 million  
12 [Facebook] users in the U.S. are under the age of 13, and about 5 million are under the age of 10.”<sup>311</sup>  
13 Meta knows through retrospective cohort analyses that “up to 10 to 15% of even 10-year-olds in a  
14 given cohort may be on Facebook or Instagram.”<sup>312</sup>

15           254. Meta knows that its chosen method of registration does not adequately protect minor  
16 users from reporting inaccurate and implausible age information. As one product engineer cautioned  
17 while analyzing the age of Facebook users, “Don’t believe anything in the stated age graph for under  
18

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19 <sup>309</sup> Kashmir Hill, *Mark Zuckerberg Is Wrong About Kids Under 13 Not Being Allowed on*  
20 *Facebook* (May 20, 2011), [https://www.forbes.com/sites/kashmirhill/2011/05/20/mark-](https://www.forbes.com/sites/kashmirhill/2011/05/20/mark-zuckerberg-is-wrong-about-kids-under-13-not-being-allowed-on-facebook/?sh=2ea85e825506)  
[zuckerberg-is-wrong-about-kids-under-13-not-being-allowed-on-facebook/?sh=2ea85e825506](https://www.forbes.com/sites/kashmirhill/2011/05/20/mark-zuckerberg-is-wrong-about-kids-under-13-not-being-allowed-on-facebook/?sh=2ea85e825506).

21 <sup>310</sup> *Protecting Kids Online: Testimony from a Facebook Whistleblower Hearing before Subcomm.*  
22 *On Consumer Protection, Product Safety, and Data Security* (Oct. 5, 2021), available at  
[https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from](https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower)  
23 [%20a%20facebook%20whistleblower](https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower)

24 <sup>311</sup> Ki Mae Heussner, *Underage Facebook Members: 7.5 Million Users Under Age 13*, ABC (May  
25 9, 2011), [https://abcnews.go.com/Technology/underage-facebook-members-75-million-users-age-](https://abcnews.go.com/Technology/underage-facebook-members-75-million-users-age-13/story?id=13565619)  
[13/story?id=13565619](https://abcnews.go.com/Technology/underage-facebook-members-75-million-users-age-13/story?id=13565619).

26 <sup>312</sup> *Protecting Kids Online: Testimony from a Facebook Whistleblower Hearing before Subcomm.*  
27 *On Consumer Protection, Product Safety, and Data Security* (Oct. 5, 2021), available at  
[https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from](https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower)  
28 [%20a%20facebook%20whistleblower](https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower). *Supra* note 329.

1 30. They are all mixed up ... We have way more people who say they are born in the early 90's than  
2 exist in the population.”<sup>313</sup>

3 255. Meta’s internal studies confirm its knowledge that kids, tweens, and teens use its  
4 products. In one study, Meta researched children as young as seven and found that, in the fifth grade,  
5 “social media becomes a part of their digital diet.”<sup>314</sup> Moreover, they identified that 24% of children  
6 ages 7-9 and 38% of tweens ages 10-12 have at least one social media account,<sup>315</sup> and specifically  
7 stated that Instagram’s perceived user base included middle schoolers.<sup>316</sup>

8 256. Another internal post reveals Meta’s knowledge of the widespread use of Instagram  
9 by preteens, as well as its targeting of children under the age of 13. In a study from around January  
10 2021, titled “The Role of the Teen in Shaping a Household’s Experience of Instagram,” Meta  
11 expressed a desire to utilize teenagers as the doorway into capturing an entire household of users,  
12 including children under age 13.<sup>317</sup> The post explains that teens can be used to teach their preteen  
13 siblings how to join while underage, and to help them develop a habit of using and posting  
14 indiscriminately.<sup>318</sup> The article expresses concern that some teens may teach their preteen siblings  
15 to post less, and recommends that Meta combat this by changing perceptions among teens so that  
16 they will instruct their preteen siblings to use Instagram more spontaneously.<sup>319</sup> Key discussion  
17 points from this document include:

18           Teens strongly influenced preteens’ understanding of what and how  
19           frequently to share on IG, even discouraging them from sharing . . . .  
20           We need to understand IG myths circulating among teens to inform  
              comms and shift the perception of sharing on IG. . . .

21 <sup>313</sup> Haugen\_00012303 at Haugen\_00012314.

22 <sup>314</sup> Haugen\_00023849 at Haugen\_00023910.

23 <sup>315</sup> Haugen\_00023849 at Haugen\_00023866.

24 <sup>316</sup> Haugen\_00023849 at Haugen\_00023879.

25 <sup>317</sup> Haugen\_00016728 at Haugen\_00016728.

26 <sup>318</sup> Haugen\_00016728 at Haugen\_00016728-Haugen\_00016732.

27 <sup>319</sup> Haugen\_00016728 at Haugen\_00016736-Haugen\_00016740.



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

5 Older teens were IG catalysts for preteens. Most preteens became  
6 curious about and wanted an IG account because of their older sibling.  
7 In some cases, preteens even relied on their older sibling to create and  
8 set up their account, seeking their guidance on a username, profile,  
and accounts to [F]ollow. . . . If we’re looking to acquire (and retain)  
new users we need to recognize a teen’s influence within the  
household to help do so, and the potential ripple effect. . . .<sup>320</sup>

9 257. Meta has not used its copious knowledge about preteen engagement with its products  
10 to comply with California law. Far to the contrary, it has leveraged its research to manipulate  
11 households and target preteens through their siblings.

12 **b. Facebook’s and Instagram’s parental controls are defective.**

13 258. Once a child has begun scrolling on these products, they can use the products entirely  
14 without the protective aid of parental guidance. Indeed, Facebook and Instagram are plainly  
15 defective due to the lack of adequate parental controls, which hinder parents’ ability to monitor and  
16 protect their children from harm.

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

21 260. A reasonable company that knows or should have known its products are harmful to  
22 adolescents would require parental consent for *any* minor to use them. But Meta’s lack of parental  
23 consent requirement for users rob parents of an important way to protect their children from the  
24 harms caused by Instagram and Facebook.

25 261. Meta’s products largely lack readily available parental controls, despite their  
26 affordability and ease of implementation. For example, Meta has chosen not to: (a) require

27 \_\_\_\_\_  
28 <sup>320</sup> Haugen\_00016728 at Haugen\_00016728- Haugen\_00016734.

1 children’s accounts on Facebook and Instagram to be linked to their parents’, as it does with another  
2 one of its products Messenger Kids;<sup>321</sup> (b) send reports of a child’s activity to parents; (c) allow  
3 parents to implement maximum daily usage limitations or to prohibit use during certain hours (e.g.,  
4 school and sleep hours); (d) notify parents about interactions with accounts associated with adults;  
5 (e) notify parents when CSAM is found on a minor’s account; or (f) require parental approval before  
6 a minor can follow new accounts.

7         262. Controls like these would enable parents to track the frequency, time of day, and  
8 duration of their child’s use, a n d identify and address problems arising from such use, which  
9 is their right as parents. It is reasonable for parents to expect that social media companies that  
10 actively promote their products to minors will undertake reasonable efforts to notify parents when  
11 their children’s use becomes excessive, occurs overnight, or exposes children to harmful content.  
12 Meta could feasibly design Instagram and Facebook to do address these concerns at negligible cost.

13         263. Meta creates a foreseeable risk to Plaintiffs through its defective products, and then  
14 attempts to shift the burden of protection from those products onto parents. Meanwhile, Meta  
15 intentionally designs Facebook and Instagram to aid children’s efforts to undermine parental  
16 supervision. For example, Instagram and Facebook allow children to create a limitless number of  
17 anonymous accounts without parental approval or knowledge, and also allows kids to block parent  
18 profiles.<sup>322</sup> On Instagram, children can post stories to “Close Friends Only” (i.e., to a select group  
19

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20 <sup>321</sup> Loren Chang, *Introducing Messenger Kids, a New App for Families to Connect*, Meta (Dec. 4,  
21 2017), <https://about.fb.com/news/2017/12/introducing-messenger-kids-a-new-app-for-families-to-connect/>.

22 <sup>322</sup> In 2018, Meta observed that “the participation rate of multiple account switching (basically the  
23 equivalent of Finstas) [was] going up,” with 36% of teens engaging in multiple account switching.  
24 Haugen\_00017698 at Haugen\_00017784. “Finsta,” a widely used slang term, is a contraction of  
25 “fake” and “Insta” (short for Instagram). Caity Weaver and Danya Issawi, *‘Finsta,’ Explained*,  
26 N.Y. Times (Sept. 30, 2021), <https://www.nytimes.com/2021/09/30/style/finsta-instagram-accounts-senate.html>. “It is neither an official designation nor a type of account offered by  
27 Facebook. Rather, it is a term many users ascribe to secondary accounts they create for themselves  
28 on Instagram, where their identities — and, often, the content of their posts — are obscured to all  
but a small, carefully chosen group of followers.” Caity Weaver and Danya Issawi, *‘Finsta,’ Explained*, N.Y. Times (Sept. 30, 2021), <https://www.nytimes.com/2021/09/30/style/finsta-instagram-accounts-senate.html>.

1 of followers), excluding their parents. On Facebook, children can place their parents on a “restricted  
2 list” of people who are unable to view their stories. Meta has intentionally designed many aspects  
3 of Instagram and Facebook to undermine parental supervision in an effort to maximize teen usage:  
4 “If Mom starts using an app all the time, the app can lose a ‘cool’ factor, if we’re not conscious of  
5 separation.”<sup>323</sup> “We should be thinking about how parents being on Instagram might effect graph  
6 management and teen engagement over time. Discovery/usage of additional accounts could prove  
7 critical for authentic sharing by teens.”<sup>324</sup>

8 264. As one internal document described the issue:

9 [A]re teens able to maintain spaces that feel sacred to them (and their  
10 friends) or do we see decreased usage or new behavior patterns  
11 emerge as household members join? . . . Preservation of protected  
12 spaces with require: [1] Learning how to create spaces within the app  
13 where teens feel like they have privacy from both their own parents  
14 but also privacy from non-peers (e.g. Aunt Sally, neighbor down the  
15 street, teachers, etc.). [2] Finding opportunities, such as [“]close  
16 friends[”] where teens have their own, protected peer communities.  
17 [3] Understanding the value of certain features being more complex  
18 (i.e. indirectly made for teens because more challenging for parents  
19 or preteens). Both snapchat and TikTok are somewhat confusing to  
20 parents, in turn affording teens a protected place to play/engage.<sup>325</sup>

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

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

25 <sup>323</sup> Haugen\_00016728 at Haugen\_00016735.

26 <sup>324</sup> Haugen\_00011969 at Haugen\_00011974-75. “Graph management” apparently refers to efforts  
27 by a user to unfollow accounts, i.e. “prun[e].” META3047MDL-003-00146492 at  
28 META3047MDL-003-00146495; META3047MDL-003-00178437.

29 <sup>325</sup> Haugen\_00016728 at Haugen\_00016735.

1           they went home, while teens feel compelled to be on social media all  
2           the time.<sup>326</sup>

3           266.   When employees have raised the possibility of additional safeguards—“could we  
4           offer a parental control feature so that parents and kids could learn and cope together?”—Meta has  
5           consistently ignored them.<sup>327</sup>

6           267.   Finally, Meta has failed to develop effective reporting tools to deal with abuse  
7           directed at underage Instagram and Facebook users. Meta does not have a phone number that a  
8           parent or child can call to report such abuse in real time, and its online reporting mechanisms lack  
9           immediate response protocols, regardless of the seriousness of the harm at issue. And certain  
10          Plaintiffs have found that Meta declined to respond to reports filed through its online reporting tool,  
11          citing technical issues.

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

14          268.   From the moment a child first begins to scroll on Facebook or Instagram, Meta assails  
15          them with an addictive and harmful design. The products permeate with user experience and user  
16          interface designs intended to create and maintain an addictive “flow-state,” using auto-playing  
17          content, time-limited experiences, intermittent variable rewards, reciprocity, and gamification. Here  
18          lies a multitude of injurious product defects.

19          269.   To drive user engagement (and thereby drive data collection and advertising  
20          revenue), Facebook and Instagram utilize a series of design features that are carefully calibrated to  
21          exploit users’ neurobiology, especially aspects unique to minors. These features work in tandem  
22          with algorithmic ranking, discussed below, to promote addictive engagement. Meta understands  
23          this: “teens tell us that they try to take a break but feel compelled back onto the app.”<sup>328</sup> But it does  
24          not warn prospective or current users about the following features or their safety risks, which are  
25          particularly harmful to Plaintiffs and other children.

26                                   <sup>326</sup> Haugen\_00017069 at Haugen\_00017173.

27                                   <sup>327</sup> Haugen\_00017069 at Haugen\_00017173.

28                                   <sup>328</sup> META3047MDL-003-00093303.

1           270. *First*, Meta programs IVR into its products. Behavioral training via intermittent  
2 rewards keeps users endlessly scrolling in search of a dopamine release, oftentimes despite their  
3 desire to put their phone down and move onto other activities. Children, who are less likely to have  
4 adequate impulse control than adults, are more susceptible to being drawn into this engineered  
5 flow state and more likely to grow dependent on Facebook or Instagram.

6           271. *Second*, Facebook and Instagram utilize “Likes” to control the release of dopamine  
7 in children. This feature, which Meta first created for Facebook and “introduced ... to the world” in  
8 2010, allows users to indicate that they approve a post, and visibly tallies the number of “Likes” any  
9 given post has earned.<sup>329</sup> Instagram launched in 2010 with the like feature built-in—a user can  
10 “Like” a post simply by tapping a heart-shaped button.

11           272. As with a slot machine, users never know when a “Like” will come. Rather than  
12 delivering “Likes” in real time, Meta’s products space out “Likes” (and other notifications such as  
13 comments and follows) to trigger on a schedule most likely to strengthen users’ addiction (i.e., when  
14 they would otherwise end their use sessions). This design conditions users to stay on the apps, but  
15 also exacerbates issues of social comparison and feedback seeking, creating detrimental effects on  
16 minors’ physical and mental health. Indeed, Meta knows from its own internal research that the  
17 “Like” feature negatively impacts its younger users.<sup>330</sup> In that research, Meta acknowledged how  
18 much users care about the number of “Likes” they received.<sup>331</sup>

19           273. Despite this knowledge, Meta has expanded the “Likes” feature in both Facebook  
20 and Instagram. In December 2016, Meta began allowing users to “Like” comments, not just posts.  
21 In February 2022, Meta began allowing users to “Like” Instagram Stories.<sup>332</sup> Expanding the “Like”

22 \_\_\_\_\_  
23 <sup>329</sup> Ray C. He, *Introducing new Like and Share Buttons*, Meta (Nov. 6, 2013),  
<https://developers.facebook.com/blog/post/2013/11/06/introducing-new-like-and-share-buttons/>.

24 <sup>330</sup> See Haugen\_00008207 at Haugen\_00008210 (explaining the stress and anxiety that likes cause  
25 teens).

26 <sup>331</sup> Haugen\_0008207 at Haugen\_0008232.

27 <sup>332</sup> Jhinuk Sen, *Instagram is adding Likes to Stories so it doesn’t clog up people’s inboxes*,  
28 Business Today (Feb. 15, 2022), <https://www.businesstoday.in/technology/news/story/instagram-is-adding-likes-to-stories-so-it-doesnt-clog-up-peoples-inboxes-322661-2022-02-15>.

1 feature has intensified and multiplied the body of feedback that teen users receive (or don't receive)  
2 on their posts, preying on their desire to seek validation through comparison with others.

3 274. Meta's research confirms that hiding "Likes" for all its users would decrease social  
4 comparison on the apps.<sup>333</sup> Yet its research also demonstrated that hiding "Likes" would decrease  
5 the rates at which users click on advertisements (and thereby lower Meta's ad revenue).<sup>334</sup>

6 275. For that reason—despite its ability to alleviate the negative impact of "Likes" on  
7 Plaintiffs and younger users—Meta chose only to implement ineffective, nominal measures as a  
8 public relations strategy. Meta first created the option for users to hide "Like" counts in May 2021,  
9 but it made this an optional setting left off by default.<sup>335</sup> Moreover, even when hidden, the number  
10 of "Likes" remain visible to the poster of the content. These changes stop short of resolving the issue  
11 of negative social comparison that these score-keeping features inflict.

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

19 277. Meta designed the comment features of Reels to minimize any disruption to users'  
20 heightened flow state. The interface of Reels displays the "Like," "Comment," "Save," and "Share"  
21 buttons on the bottom right of the screen. This placement avoids the milliseconds of delay or  
22 discomfort that could disrupt the flow state of right-handed users if placed elsewhere on the screen.  
23 Furthermore, these buttons are overlaid on top of the continuously playing clips, to eliminate any

24 \_\_\_\_\_  
25 <sup>333</sup> Haugen\_0008207 at Haugen\_0008232.

26 <sup>334</sup> Haugen\_0008207 at Haugen\_0008250.

27 <sup>335</sup> Meta, *Giving People More Control on Instagram and Facebook* (May 26, 2021),  
28 <https://about.fb.com/news/2021/05/giving-people-more-control/>.

1 temporal or visual interruption during which a user might evaluate whether to continue using the  
2 product. Likewise, when a user taps to view the comments on a Reel, the video’s audio and the top  
3 quarter of the video continue to play behind the comments section. Again, this design feature keeps  
4 the user’s attention on the feed.

5 278. In keeping with its study of IVR, Meta knows when to strategically interrupt a user’s  
6 flow. Occasionally, while a video is playing, a comment from the video will appear on the bottom  
7 of the screen, even without the user tapping to view the comments section. These comments are  
8 selected, displayed, and timed intentionally, to retain a user’s attention by engaging with the  
9 comments section.

10 279. *Fourth*, Meta carefully (and defectively) calibrates the notifications it sends outside  
11 of the Facebook and Instagram apps, to maximize success in drawing back users who are not  
12 presently using the products. By default, Facebook and Instagram notify users through text and  
13 email about activity that might be of interest, which prompts users to open and reengage with the  
14 products. However, Meta intentionally chooses to display only a limited amount of information in  
15 notifications, in order to trigger curiosity and manipulate the user to click or tap through to the  
16 product.<sup>336</sup> In December 2020, Meta internally acknowledged that the goal of this feature was to  
17 optimize engagement at the expense of value to users: “A few years ago we stopped sending out  
18 emails telling you what happened - e.g., telling you what your friend did - instead we just say  
19 ‘someone comment [sic] on your post,’ in the hope that you’ll click through. This a clear value-  
20 engagement tradeoff.”<sup>337</sup> Similarly, Meta stopped sending push notifications about friend activities,  
21 finding that, without notifications, users were forced to go to the product itself to “check what’s  
22 happening,” thereby initiating a new session, increasing engagement, and improving Meta’s bottom  
23  
24  
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26 <sup>336</sup> *Clickbait*, Merriam-Webster Dictionary, [https://www.merriam-](https://www.merriam-webster.com/dictionary/clickbait)  
27 [webster.com/dictionary/clickbait](https://www.merriam-webster.com/dictionary/clickbait).<https://www.merriam-webster.com/dictionary/clickbait>.

28 <sup>337</sup> Haugen\_00010114 at Haugen\_00010117.

1 line.<sup>338</sup> It designed these features despite knowledge that notifications were tied to potentially  
2 addictive behaviors,<sup>339</sup> and in disregard of safer alternative designs.<sup>340</sup>

3 280. Meta’s studied manipulation of user engagement through notifications is particularly  
4 detrimental to teenagers, who lack impulse control and crave social rewards, and who are therefore  
5 more susceptible to falling into compulsive patterns of product use. Those harms are compounded  
6 by the fact that Meta sends push notifications in the middle of the night, prompting children to re-  
7 engage with Instagram and Facebook the apps when they should be sleeping. Disturbed and  
8 insufficient sleep is associated with poor health outcomes.<sup>341</sup>

9 281. *Fifth*, the “Stories” feature of both Facebook and Instagram is defectively designed  
10 to create artificial urgency so that users return to the apps. “Stories” was added by Meta in response  
11 to the growing popularity of Snapchat with teenagers in 2016. “Stories” appear at the top of a user’s  
12 home page upon opening the app and are available to view for only 24 hours, after which they  
13 disappear. This creates pressure to use the product daily, or else risk missing out on dopamine-  
14 causing stimuli or social interactions. This feature is particularly addicting to adolescent users like  
15 Plaintiffs, who feel increased social pressure to view all their contact’s stories each day before the  
16 content disappears, thus increasing their compulsive usage and potential addiction to the product.<sup>342</sup>

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18  
19  
20 <sup>338</sup> Haugen\_00010114 at Haugen\_00010117.

21 <sup>339</sup> See Haugen\_00016893 at Haugen\_00016899-902.

22 <sup>340</sup> See Haugen\_00016893 at Haugen\_00016913 (suggesting changing to a subtler form of  
23 notifications); Haugen\_00016893 at Haugen\_00016915- Haugen\_00016916 (Meta intern urging  
24 the company to stop “inundating users with excessive notifications” and instead focus on user  
25 experience to create meaningful connections for users).

26 <sup>341</sup> Nat’l Inst. of Mental Health, *The Teen Brain: Still Under Construction* 6 (2011),  
[http://www.ncdsv.org/images/NIMH\\_TeenBrainStillUnderConstruction\\_2011.pdf](http://www.ncdsv.org/images/NIMH_TeenBrainStillUnderConstruction_2011.pdf).

27 <sup>342</sup> Sarah Lempa, *Why Are Instagram Stories So Addicting?*, Healthline (April 5, 2021),  
28 <https://www.healthline.com/health/why-are-instagram-stories-so-addicting#The-story-behind-the-Stories>.



1 The ephemeral nature of disappearing content is a ploy intended to inspire urgent perusal, and it  
2 works.<sup>343</sup>

3 282. *Sixth*, Instagram and Facebook have recognized that their algorithms are structured  
4 to recommend “keywords” or “hashtags” to its young users that lead them to navigate to dangerous  
5 content.<sup>344</sup> One researcher put the matter directly in April 2021: “A recurring area of concern is that  
6 we are recommending keywords related to significant safety and wellbeing concerns e.g. weight  
7 loss, diet pills, appetite suppressants. We have been flagging these terms as they appear and Product  
8 Policy and Product teams have been sweeping the list of keywords to remove them, but this is not  
9 sustainable and remains a significant safety, policy, and comms risk. Our current approach of  
10 catching all potentially risky terms in a ‘block list’ has not helped us avoid two news cycles, and the  
11 possibility of this happening a third time is a significant comms and policy risk.”<sup>345</sup> As another set  
12 of Meta researchers acknowledged, the majority of negative experiences on Instagram come not  
13 from direct interactions with others (i.e., through comments or direct messages) but rather through  
14 algorithmically-generated recommendations, via Explore, Feed, or hashtags.<sup>346</sup>

15 283. All of the above defects, in addition to those discussed in the section that follows,  
16 interact with and compound one another to make Meta’s products relentlessly addictive and harmful  
17 for kids, including Plaintiffs.

18 284. Meta has long been aware of this compounding likelihood of injury posed by its  
19 products.

22 \_\_\_\_\_  
23 <sup>343</sup> Madiha Jamal, *Ephemeral Content — The Future of Social Media Marketing*, Better Marketing  
24 (March 2, 2021), <https://bettermarketing.pub/ephemeral-content-the-future-of-social-media-marketing-996d265916c2#:~:text=Ephemeral%20content%20relates%20to%20the,WhatsApp%20Stories%2C%20and%20LinkedIn%20Stories.>

25 <sup>344</sup> See META3047MDL-003-00068863 at META3047MDL-003-00068905 (“We are leading  
26 users to content that can intensify their feelings through suggested/related hashtags”).

27 <sup>345</sup> META3047MDL-003-00184585 at META3047MDL-003-00184587.

28 <sup>346</sup> META3047MDL-003-00087111 at 7112.

1           285. In 2017, Meta investigated Facebook users who were addicted to the product—that  
2 is, those who “cannot stop using [the] product to the point where it can cause them harm.”<sup>347</sup> The  
3 research found that, “[i]n a given week, approximately 5.9 million people leave Facebook” because  
4 they “spent too much time” or because they were taking a temporary break and “planned to  
5 return.”<sup>348</sup> “[T]his subset provided a good signal for people who could be addicted, who ultimately  
6 leave Facebook as a solution.<sup>349</sup> The analysis also found that this subset had a higher number of  
7 sessions per day, received more notifications, and responded quicker to notifications compared to  
8 all users.<sup>350</sup> In 2018, Meta examined the issue of what its researchers called “Facebook addiction”  
9 through a study titled “Problematic Facebook Use: When People Feel Like Facebook Negatively  
10 Affects Their Life.”<sup>351</sup> The investigators defined “problematic use” as meaning: “Serious problems  
11 with sleep, work or relationship that they attribute to Facebook AND concerns or preoccupations  
12 about how they use Facebook (e.g., a fear of missing out (FOMO) or lack of control).”<sup>352</sup> Notably,  
13 the investigators did not target the heaviest Facebook users in their research.<sup>353</sup>

14           286. The study found that up to 5% of teens ages 13-20 were problematic users.<sup>354</sup>  
15 “Problematic use is highest among teens and people in their 20s, consistent with previous findings  
16 that younger people generally have more problems with self-regulation.<sup>355</sup> Additionally,  
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18 <sup>347</sup> Haugen\_00016893 at Haugen\_00016895. This group’s investigation also included meeting  
19 with Nir Eyal, author of the book *Hooked: How to Build Habit-Forming Products*.

20 <sup>348</sup> Haugen\_00016893 at Haugen\_00016898.

21 <sup>349</sup> Haugen\_00016893 at Haugen\_00016898.

22 <sup>350</sup> Haugen\_00016893 at Haugen\_00016899-Haugen\_00016802.

23 <sup>351</sup> Haugen\_00021690 at Haugen\_00021690.

24 <sup>352</sup> Haugen\_00021690 at Haugen\_00021692.

25 <sup>353</sup> Haugen\_00021690 at Haugen\_00021697.

26 <sup>354</sup> Haugen\_00021690 at Haugen\_00021699.

27 <sup>355</sup> Haugen\_00021690 at Haugen\_00021697.

1 “problematic users” evidenced common tendencies, such as (a) accessing and spending more time  
2 on Facebook; (b) using Facebook late at night; (c) receiving more and responding more quickly to  
3 push notifications; (d) temporarily deactivating their account in the past; and I sending far more  
4 messages per minute with a higher ratio of messages sent to messages received.<sup>356</sup> As noted above,  
5 Meta understands that “teens feel addicted to IG and feel a pressure to be present” and “like addicts,  
6 they feel that they are unable to stop themselves from being on IG.”<sup>357</sup>

7 287. A study into Instagram user behaviors from that same year similarly found that “high  
8 time spent users do tend to be disproportionately younger users, and these users may warrant extra  
9 attention.”<sup>358</sup> The study found that “[a]s time spent increases, we see a larger proportion of users  
10 that are high school, college or early work life-stages, with additional increases in high school when  
11 we zoom in on the top 1% of time spent users.”<sup>359</sup>

12 288. Meta knows that “problematic use” of Facebook and Instagram leads to real  
13 problems. In one internal company document, Meta acknowledged that the pressure to be present  
14 and obtain validation on Instagram meant that teens lacked the capacity to “switch off and shut  
15 down,” noting that teens “can get addicted to things that make them feel bad.”<sup>360</sup> One of Meta’s data  
16 scientists did not mince words when describing this phenomenon to their colleagues:

17 I worry that driving sessions incentivize us to make our product  
18 more addictive, without providing much more value. How to keep  
19 someone returning over and over to the same behavior each day?  
20 Intermittent rewards are most effective (think slot machines),  
reinforcing behaviors that become especially hard to distinguish—  
even when they provide little reward, or cease providing reward at  
all.<sup>361</sup>

22 <sup>356</sup> Haugen\_00021690 at Haugen\_00021695-Haugen\_00021697.

23 <sup>357</sup> META3047MDL-003-00157036 at META3047MDL-003-00157036.

24 <sup>358</sup> Haugen\_00017177 at Haugen\_00017181.

25 <sup>359</sup> Haugen\_00017177 at Haugen\_00017187.

26 <sup>360</sup> Haugen\_00017069 at Haugen\_00017128, Haugen\_00017132.

27 <sup>361</sup> Haugen\_00010114 at Haugen\_00010127.

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

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

8 [A]bout 30% (and an even larger proportions of those who are  
9 unsatisfied with their lives) said that the amount of time they spend  
10 on social media makes them feel worse. About half of teens in both  
11 markets want Instagram to take a break or to get off the app. . . . [In  
12 another survey], we found that time spent is among one of the most  
13 negative experiences for IG (25%+ say they spend too much time on  
14 social media and it’s worst on Instagram and Facebook). At the same  
15 time, they didn’t think there was anything they could do about it and  
16 had fairly negative things to say about the time spent tools we have  
17 (particularly that the tools are easy to ignore).<sup>362</sup>

18 289. In January 2021, another Meta employee wrote: “No one wakes up thinking they  
19 want to maximize the number of times they open Instagram that day. But that’s exactly what our  
20 product teams are trying to do.”<sup>363</sup>

21 290. Meta failed to invest in adequate tools to limit the harm their products inflicted on  
22 users. As one employee candidly put it: “the tools we currently have aren’t effective at limiting  
23 [users’] time on the app.”<sup>364</sup> Nonetheless, Meta publicly presented certain of these tools as solutions,  
24 despite knowing of their ineffectiveness. For example, Meta offered its users a feature that purported  
25 to show how much time users had spent on Instagram, and Meta touted this feature “when speaking  
26 to consumers, the press, and stakeholders about our efforts to combat social media addiction.”<sup>365</sup>  
27 But internally, Meta acknowledged that the data reported by this tool was fundamentally “incorrect”:  
28 “It’s not just that Apple / Google have better data. Ours is wrong. Far worse. We’re sharing bad  
29 metrics externally. We’ve been unable to right it despite several person-months of efforts. . . . So

30 \_\_\_\_\_  
31 <sup>362</sup> Haugen\_00017069 at Haugen\_00017171.

32 <sup>363</sup> META3047MDL-003-00161686 at META3047MDL-003-00161686.

33 <sup>364</sup> META3047MDL-003-00157036 at META3047MDL-003-00157036.

34 <sup>365</sup> META3047MDL-003-00157036 at META3047MDL-003-00157036.

1 it's wrong (bad enough in itself), can't be fixed easily (we've tried), has been half-rolled-out for a  
2 while . . . the group that audits metrics we provide to the outside world, has called us out on it...The  
3 reason this is relevant is we vouch for these numbers. Any day they're out there is a legal  
4 liability.”<sup>366</sup>

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

9 Integrity teams are facing increasing barriers to building safeguards.  
10 . . . [T]ime and time again I've seen promising interventions from  
11 integrity product teams, with strong research and data support be  
12 prematurely stifled or severely constrained by key decision makers—  
13 often based on fears of public and policy stakeholder responses.  
14 Similarly (though even more concerning), I've seen already built &  
functioning safeguards being rolled back for the same reasons . . .  
While mountains of evidence is (rightly) required to support a new  
intervention, none is required to kill (or severely limit) one. . . . [This]  
is intended as a call to reflection for those decision-makers imposing  
constraints.<sup>367</sup>

15 292. Meta's decision to addict teenage users by rewiring their brains has not aged well for  
16 some of its former employees. Chamath Palihapitiya, the former Vice President of User Growth at  
17 Facebook, admitted that he feels “tremendous guilt” about his contributions to social media, saying  
18 “[t]he short-term, dopamine-driven feedback loops that we have created are destroying how society  
19 works.”<sup>368</sup>

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24 <sup>366</sup> META3047MDL-003-00157133 at META3047MDL-003-00157133.

25 <sup>367</sup> Haugen\_00021096 at Haugen\_00021097-Haugen\_0002110 (emphasis omitted).

26 <sup>368</sup> Amy B. Wang, *Former Facebook VP says social media is destroying society with 'dopamine-*  
27 *driven feedback loops'*, Wash. Post (Dec. 12, 2017), [https://www.washingtonpost.com/news/the-](https://www.washingtonpost.com/news/the-switch/wp/2017/12/12/former-facebook-vp-says-social-media-is-destroying-society-with-dopamine-driven-feedback-loops/)  
28 [switch/wp/2017/12/12/former-facebook-vp-says-social-media-is-destroying-society-with-](https://www.washingtonpost.com/news/the-switch/wp/2017/12/12/former-facebook-vp-says-social-media-is-destroying-society-with-dopamine-driven-feedback-loops/)  
[dopamine-driven-feedback-loops/](https://www.washingtonpost.com/news/the-switch/wp/2017/12/12/former-facebook-vp-says-social-media-is-destroying-society-with-dopamine-driven-feedback-loops/).



1 users.<sup>369</sup> Meta’s algorithms identify and rank recommended posts to optimize for various outcomes,  
2 such as for time-spent by a user or for user engagement. Often this has the effect that Meta’s  
3 algorithms direct users to alarming and aversive material.<sup>370</sup>

4 297. Much of what Meta shows users is content that they did not sign up for. In a 2019  
5 internal document, a Meta data scientist explained: “users have told us the pages they would like to  
6 see content from, but we often override those explicit preferences because our predictions of what  
7 will get shared and engaged with disagree.”<sup>371</sup> This same employee pointed to additional data  
8 demonstrating that users get relatively little connected content (content from pages they chose to  
9 like) as opposed to unconnected content that is reshared by others, even as Meta knows that such  
10 content is less valued by users.<sup>372</sup>

11 298. Meta also optimizes the design of its products for overall “network value”—that is,  
12 what will get the most downstream engagement by other users—rather than what that specific user  
13 would like.<sup>373</sup> As one Meta employee put it, “we show things to users that we think they have a  
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16 <sup>369</sup> Instagram’s former Head of Product Analytics defined “ranking” as “an ordering of content by  
17 importance or relevance” in a 2018 post titled “Is Ranking Good?”. Haugen\_00002372 at  
18 Haugen\_00002374.

19 <sup>370</sup> Haugen\_00006798 at Haugen\_00006799 (observing that Meta’s recommendation algorithms  
20 “are prone to recommending harmful content.”); Haugen\_00024997 at Haugen\_00024997  
21 (conducting experiment showing that, in 3 weeks, “by following just ... *recommended* content, the  
22 test user’s News Feed has become a near constant barrage of polarizing nationalist content,  
23 misinformation, and gore.” (emphasis in original)); Haugen\_00024997 at Haugen\_00024998  
24 (“when Watch isn’t sure what you want, it seems to recommend a lot of softcore porn.”);  
25 Haugen\_00003739 at Haugen\_00003740 (“[Instagram] is more ‘successful’ ranking harmful  
26 content than benign content, and is more likely to mistakenly rank higher a harmful content than to  
27 mistakenly rank higher benign content.”).

28 <sup>371</sup> Haugen\_00021247 at Haugen\_000212448; *see also* Haugen\_00006798 at Haugen\_00006799  
(Meta Research Scientist in 2019: “it’s at best unclear whether users ‘want’ us to put unconnected  
stories in their feed, even if they like some of them.”).

<sup>372</sup> Haugen\_00021247 at Haugen\_000212448.

<sup>373</sup> Haugen\_00021247 at Haugen\_00021251.



1 small chance of sharing, leading to comments between people who see it downstream over things  
2 that have a greater chance of being explicitly liked by that user.”<sup>374</sup>

3 299. Through these algorithms, Meta intentionally supplants the content that users have  
4 elected to see with content that it believes will drive more use and engagement. Thus, the products  
5 that Meta touts as “[g]iv[ing] people the power to build community and bring[ing] the world closer  
6 together,” are designed in a way that prioritizes not social connection but product use at all costs,  
7 even to the detriment of the health and safety of young people.<sup>375</sup> The result for Meta is an increase  
8 in its bottom line. The result for young users is products that are so addictive that they return again  
9 and again, even when their mental and physical health suffers greatly.

10 300. Meta knew that its engagement-based ranking algorithm (and its subsequent,  
11 iterative MSI ranking algorithm) was structured so that content which produces intense reactions  
12 (i.e., strong engagement) triggers amplification by the apps. This propels users into the most reactive  
13 experiences, favoring posts that generate engagement because they are extreme in nature.  
14 Zuckerberg publicly recognized this in a 2018 post, in which he demonstrated the correlation  
15 between engagement and sensational content that is so extreme that it impinges upon Meta’s own  
16 ethical limits, with the following chart:<sup>376</sup> While Zuckerberg went on to claim that Meta had  
17 designed its algorithms to avoid this natural propensity of engagement-based algorithms, his claim  
18 to the public is belied by the extensive internal and external research indicating Meta’s products did  
19 amplify extreme material.

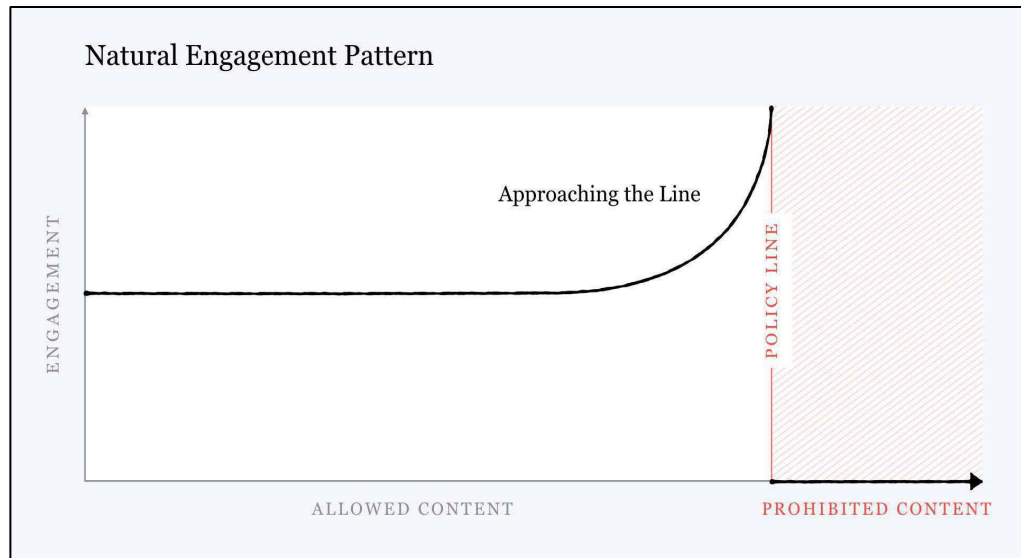
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<sup>374</sup> Haugen\_00021247 at Haugen\_00021251.

<sup>375</sup> Meta, *Mission Statement*, Meta, <https://about.meta.com/company-info/>.

<sup>376</sup> Mark Zuckerberg, *A Blueprint for Content Governance and Enforcement*, Facebook, <https://www.facebook.com/notes/751449002072082/>.



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301. Other documents show that Meta’s employees also discussed their motive for changing the design of the algorithm—namely, that users began to interact less with the product, which became a worrisome trend for Meta’s bottom-line. Meta’s engagement-based algorithm (including its MSI variant) exploited extreme content to drive more engagement, which, in turn, helped Meta sell more of the digital ads that generated most of their revenue. In 2016, one Facebook Tech Lead wrote: “[W]e only cared about things like time spent, open links, etc. That’s what we optimized for. That’s what we used to define success and failure. And that’s the problem.”<sup>377</sup>

302. Meta intentionally designed its MSI-focused algorithms to collect and analyze several kinds of Plaintiffs’ data: a user’s profile, content the user reports, content the user posts, content viewed, content engaged with, navigation paths, watch time, hover time (the amount of time a user viewed a piece of content), whether a user mutes or unmutes a video, and whether a user makes a full video screen, among other data.<sup>378</sup> Meta uses this data to predict what posts will capture users’ attention. Meta also tracks and utilizes data from various other sources, such as a users’ off-

<sup>377</sup> Haugen\_00001033 at Haugen\_00001033.

<sup>378</sup> Haugen\_00017177 at Haugen\_00017177.

1 product activities and the activities on websites that contain Facebook or Instagram “Like” or share  
2 buttons.<sup>379</sup>

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

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

17 305. While Meta has publicly attempted to cast MSI as making time spent on its platforms  
18 more “meaningful,” MSI was just another way for Meta to increase user engagement on Instagram  
19 and Facebook. While the feature increases the chance that product interaction will be “meaningful”  
20 by Meta’s definition—more “Likes,” comments, and interactions—it does not consider whether  
21 recommended content is welcomed by the user. This sets up users who may have rejected upsetting  
22 or dangerous posts to see more of the same, resulting in what Meta itself calls a “horrible feedback  
23 loop / downward spiral.”<sup>380</sup> Also referred to as “fee[d]ing the spiral,”<sup>381</sup> the MSI algorithm

24 \_\_\_\_\_  
25 <sup>379</sup> Allen St. John, *How Facebook Tracks You, Even When You're Not on Facebook*, Consumer  
26 Reports (April 11, 2018), [https://www.consumerreports.org/privacy/how-facebook-tracks-you-  
even-when-youre-not-on-facebook-a7977954071/](https://www.consumerreports.org/privacy/how-facebook-tracks-you-even-when-youre-not-on-facebook-a7977954071/).

27 <sup>380</sup> META3047MDL-003-00068860 at META3047MDL-003-00068861.

28 <sup>381</sup> META3047MDL-003-00121808 at META3047MDL-003-00121808. Meta employees

1 increases the likelihood that a user “see[s] content that makes them feel bad, they engage with it  
2 [even if only to reject it], and then their [user experience] is flooded w[ith] it.”<sup>382</sup> Meta recognizes  
3 that Instagram users at risk of suicide or self-injury are more likely to “encounter more harmful  
4 suicide and self-injury content (through explore, related, follower suggestions, etc).”<sup>383</sup> Because  
5 Meta’s algorithm prioritizes engagement above all else, any harmful feeling or impulse that users  
6 have are amplified by Instagram—which becomes an echo chamber screaming their most upsetting  
7 thoughts back at them.

8         306. This feedback-loop dynamic was cast into vivid relief when 14 year-old Molly  
9 Russell took her own life after viewing reams of content related to suicide, self-injury, and  
10 depression on Instagram and several other products.<sup>384</sup> During an official inquest investigating the  
11 role that social media products played in her death, a Meta executive said that such content was  
12 “safe” for children to see.<sup>385</sup> The coroner rejected this claim, finding instead that Molly “died from  
13 an act of self-harm whilst suffering from depression and the negative effects of on-line content” that  
14 she had not sought out, but that the products’ algorithms had pushed on her.<sup>386</sup> “The platform  
15

16 \_\_\_\_\_  
17 sometimes refer to this “spiral” as a “rabbit hole.” *See also* META3047MDL-003-00077939 at  
18 META3047MDL-003-00077939.

18 <sup>382</sup> META3047MDL-003-00121808 at META3047MDL-003-00121808.

19 <sup>383</sup> META3047MDL-003-00068863 at META3047MDL-003-00068905, META3047MDL-003-  
20 00068878; *see also* META3047MDL-003-00042548 (“[P]eople who are suffering from  
21 depression and self-harm go down IG rabbit holes, and explore functionality compounds this  
22 issue.”).

22 <sup>384</sup> Dan Milmo, *Social Media Firms ‘Monetising Misery’, Says Molly Russell’s Father After*  
23 *Inquest*, The Guardian (Sept. 20, 2022), [https://www.theguardian.com/uk-](https://www.theguardian.com/uk-news/2022/sep/30/molly-russell-died-while-suffering-negative-effects-of-online-content-rules-coroner)  
24 [news/2022/sep/30/molly-russell-died-while-suffering-negative-effects-of-online-content-rules-](https://www.theguardian.com/uk-news/2022/sep/30/molly-russell-died-while-suffering-negative-effects-of-online-content-rules-coroner)  
25 [coroner](https://www.theguardian.com/uk-news/2022/sep/30/molly-russell-died-while-suffering-negative-effects-of-online-content-rules-coroner).

25 <sup>385</sup> Ryan Merrifield, *Molly Russell Inquest: Instagram Boss Says Suicidal Posts Shouldn’t Be*  
26 *Banned From App*, The Mirror (Sept. 26, 2022), [https://www.mirror.co.uk/news/uk-news/molly-](https://www.mirror.co.uk/news/uk-news/molly-russell-inquest-instagram-boss-28085269)  
27 [russell-inquest-instagram-boss-28085269](https://www.mirror.co.uk/news/uk-news/molly-russell-inquest-instagram-boss-28085269).

27 <sup>386</sup> Ryan Merrifield, *Molly Russell Inquest: Instagram Boss Says Suicidal Posts Shouldn’t Be*  
28 *Banned From App*, The Mirror (Sept. 26, 2022), [https://www.mirror.co.uk/news/uk-news/molly-](https://www.mirror.co.uk/news/uk-news/molly-russell-inquest-instagram-boss-28085269)  
29 [russell-inquest-instagram-boss-28085269](https://www.mirror.co.uk/news/uk-news/molly-russell-inquest-instagram-boss-28085269).

1 operated in such a way using algorithms as to result, in some circumstances, of binge periods of  
2 images, video clips and text some of which were selected and provided without Molly requesting  
3 them. These binge periods ... are likely to have had a negative effect on Molly.... In some cases,  
4 the content was particularly graphic, tending to portray self-harm and suicide as an inevitable  
5 consequence of a condition that could not be recovered from. The sites normalized her condition  
6 focusing on a limited and irrational view without any counterbalance of normality.”<sup>387</sup> The coroner  
7 further observed that “[t]here was no age verification when signing up to the on-line platform” and  
8 that Molly’s parents “did not have access, to the material being viewed or any control over that  
9 material.”<sup>388</sup>

10 307. Disturbingly, years before Meta sent an executive to the inquest to tout its products  
11 as “safe,” Meta had conducted internal research which warned that there was a risk of “similar  
12 incidents like Molly Russell” because algorithmic product features were “[l]eading users to  
13 distressing content.”<sup>389</sup>

14 308. Despite Molly’s death, and notwithstanding Meta’s research into dangerous spirals—  
15 at one point dubbed the “Rabbothole project”—the company did nothing to stop harm to its young  
16 users. Meta has been clear about the problem: for young users, “our recommendations algorithms  
17 will start pushing you down a rabbit hole of more egregious content.”<sup>390</sup> They have been clear about  
18 potential solutions: targeted changes to the algorithm do lead to a “meaningful drop in exposure” to  
19

20 <sup>387</sup> Andrew Walker, H.M. Coroner, *Regulation 28 Report to Prevent Future Deaths 2* (Oct. 13,  
21 2022), [https://www.judiciary.uk/wp-content/uploads/2022/10/Molly-Russell-Prevention-of-future-](https://www.judiciary.uk/wp-content/uploads/2022/10/Molly-Russell-Prevention-of-future-deaths-report-2022-0315_Published.pdf)  
22 [deaths-report-2022-0315\\_Published.pdf](https://www.judiciary.uk/wp-content/uploads/2022/10/Molly-Russell-Prevention-of-future-deaths-report-2022-0315_Published.pdf).

23 <sup>388</sup> Andrew Walker, H.M. Coroner, *Regulation 28 Report to Prevent Future Deaths 2* (Oct. 13,  
24 2022), [https://www.judiciary.uk/wp-content/uploads/2022/10/Molly-Russell-Prevention-of-future-](https://www.judiciary.uk/wp-content/uploads/2022/10/Molly-Russell-Prevention-of-future-deaths-report-2022-0315_Published.pdf)  
25 [deaths-report-2022-0315\\_Published.pdf](https://www.judiciary.uk/wp-content/uploads/2022/10/Molly-Russell-Prevention-of-future-deaths-report-2022-0315_Published.pdf).

26 <sup>389</sup> META3047MDL-003-00043617 at META3047MDL-003-00043644.

27 <sup>390</sup> META3047MDL-003-00077939; *see also* META3047MDL-003-00068860 at \*60 (users  
28 “seeking” bad experiences can “get into a rabbithole of getting more and more bad content on our  
surfaces.”); META3047MDL-003-00087111 at 7112 (acknowledging that a majority of “negative  
experiences” come from algorithmically-powered features like explore and hashtags).

1 problematic content.<sup>391</sup> But they have been resistant to making changes, for the explicit, profit-  
2 minded reason that such tweaks “came with a clear engagement cost.”<sup>392</sup>

3 e. **Meta’s defective product features cause negative appearance**  
4 **comparison and social comparison**

5 309. As a child’s addiction to Facebook or Instagram grows, the child spends more and  
6 more time exposed to the kinds of content that captures their attention most powerfully. As Meta  
7 knows, prolonged, addictive exposure to a Feed often focused on unrealistic and unattainable ideals  
8 of beauty, which attacks the self-worth and well-being of children, particularly female children.

9 310. Meta has known since at least 2018 that Instagram has a corrosive effect on the  
10 mental health of pre-teen and teenage users.<sup>393</sup> Meta has an internal research team comprised of  
11 employees with expertise in, *inter alia*, computer science, psychology, and quantitative and  
12 qualitative analysis. From 2019 to 2021, this team conducted a “teen mental health deep dive” which  
13 included focus groups, diary studies, and online surveys. One large-scale study paired a survey of  
14 tens of thousands of Instagram users with data about the time each respondent spent on Instagram  
15 and the type of content they viewed.<sup>394</sup>

16 311. The evidence collected by Meta’s research team is damning. Among other findings,  
17 Defendants’ researchers learned that:

18  
19  
20  
21 <sup>391</sup> META3047MDL-003-00077939.

22 <sup>392</sup> META3047MDL-003-00077939.

23 <sup>393</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*  
24 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)  
25 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); META3047MDL-003-00146240 at  
META3047MDL-003-00146256.

26 <sup>394</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*  
27 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)  
28 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); Haugen\_00017069; META3047MDL-003-  
00000029.

- 1 • 41% of teen users of Instagram in the U.S. and U.K. who reported feeling
- 2 “unattractive” said the feeling began while using the product;<sup>395</sup>
- 3 • 32% of teenage girls said that when they felt bad about their bodies,
- 4 Instagram made them feel worse;<sup>396</sup>
- 5 • “We make body issues worse for 1 in 3 teen girls;”<sup>397</sup>
- 6 • “Frequent social comparison is a key driver of subjective well-being and
- 7 teens say IG makes this problem worse;”<sup>398</sup>
- 8 • One in five teens say that Instagram makes them feel worse about
- 9 themselves;<sup>399</sup>
- 10 • Two-thirds of teen girls on Instagram experience negative social
- 11 comparison;<sup>400</sup>
- 12 • 17% of teen girl Instagram users say the product makes “[e]ating [i]ssues”
- 13 worse;<sup>401</sup>
- 14
- 15

16 <sup>395</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*

17 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)

18 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); META3047MDL-003-00000029 at

META3047MDL-003-00000043.

19 <sup>396</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*

20 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)

21 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); Haugen\_00019219 at Haugen\_00019226;

META3047MDL-003-00001846 at META3047MDL-003-00001852.

22 <sup>397</sup> Haugen\_00016699 at Haugen\_00016707.

23 <sup>398</sup> Haugen\_00019219 at Haugen\_00019226.

24 <sup>399</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*

25 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)

26 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); Haugen\_00017069 at Haugen\_00017091;

META3047MDL-003-00000029 at META3047MDL-003-00000049.

27 <sup>400</sup> Haugen\_00019219 at Haugen\_00019226.

28 <sup>401</sup> Haugen\_00020135 at Haugen\_00020162.



- 1 • About a quarter of teens who reported feeling “not good enough” said the  
2 feeling started on Instagram;<sup>402</sup>
- 3 • Many teens said Instagram undermined their confidence in the strength of  
4 their friendships;<sup>403</sup>
- 5 • Teenagers who struggle with mental health say that Instagram worsens those  
6 problems;<sup>404</sup>
- 7 • “Teens blame Instagram for increases in the rates of anxiety and depression  
8 among teens” in recent years—a response that was unprompted and  
9 consistent across all groups;<sup>405</sup>
- 10 • Among teens who reported suicidal thoughts, 13% of British users and 6%  
11 of American users traced the desire to kill themselves to Instagram;<sup>406</sup> and  
12  
13  
14

15 <sup>402</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*  
16 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)  
17 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); META3047MDL-003-00000029 at  
18 META3047MDL-003-00000043.

19 <sup>403</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*  
20 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)  
21 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); META3047MDL-003-00000029 at  
22 META3047MDL-003-00000043.

23 <sup>404</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*  
24 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)  
25 [instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); META3047MDL-003-00000029 at  
26 META3047MDL-003-00000054.

27 <sup>405</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*  
28 *Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)  
[instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667); META3047MDL-003-00000029 at  
META3047MDL-003-00000052.

<sup>406</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*  
*Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)  
[instagram-kids-tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667) ; META3047MDL-003-00000029 at  
META3047MDL-003-00000043.



- 13.5% of teen girl Instagram users say the product makes thoughts of “suicide and self-injury” worse.<sup>407</sup>

312. Meta’s researchers were clear in explaining that Instagram product features were responsible for these problems. In one chart illustrating the “High” amount of “Body, Appearance Comparison” on Instagram, researchers cited as contributing factors “Product mechanics (addicting)” and “Explore, discover, stalk (down the rabbit hole).”<sup>408</sup> In another slide, researchers noted the particular problems with Instagram’s Explore feature, as it contains “[t]ons of body image triggers” that are “[i]ntimidating” to users.<sup>409</sup>

313. Children are developmentally unprepared for the psychological ramifications of peer judgment and online comparisons.

314. Meta’s internal researchers were not only clear about the fact that Instagram causes a high level of social comparison for teenagers; they were clear-eyed about the dire consequences. They observed that the addictive nature of the Instagram product, combined with a tendency for users to share only the best moments and a pressure to match unrealistic beauty ideals, can send teens into a downward spiral that includes anger, withdrawal, insecurity, and body dysmorphia—“a series of emotions that in many ways mimic stages of grief.”<sup>410</sup> They further warned that “[u]sers[‘] experience of [this] downward spiral is exacerbated by our platform.”<sup>411</sup> “Comparisons on Instagram can change how young women view and describe themselves,” they noted, changing a girl’s self-perception from “multi-dimensional” and “centered” to “not in control,” “dark,” boxed in,” “low esteem,” and “anxious.”<sup>412</sup> The researchers’ conclusions were stark: “Mental health

<sup>407</sup> Haugen\_00016699 at Haugen\_00016707.

<sup>408</sup> Haugen\_00015958 at Haugen\_00015987.

<sup>409</sup> Haugen\_00015958 at Haugen\_00015989.

<sup>410</sup> Haugen\_00015958 at Haugen\_00015985.

<sup>411</sup> Haugen\_00015958 at Haugen\_00015990.

<sup>412</sup> Haugen\_00015958 at Haugen\_00015983.

1 outcomes related to this can be severe,” and can include “eating disorders,” “body dysmorphia,”  
2 “body dissatisfaction,” “depression,” and “loneliness.”<sup>413</sup>

3 315. Meta’s research demonstrates that social comparison is particularly bad on Instagram  
4 because, among other things, celebrity and influencer content is pervasive.<sup>414</sup> By manufacturing and  
5 emphasizing influence and celebrity, and purposely inundating tween and teen users with those  
6 accounts, Meta further exploits and monetizes social comparison. That has come at a direct cost to  
7 the mental health of its teen users, who are more susceptible to body dissatisfaction and negative  
8 social comparisons.<sup>415</sup> Meta knows as much. In 2021, its researchers found that exposure to content  
9 from “Top Accounts” (i.e., those with the top 0.1% of followers) was most associated with negative  
10 comparison and that Instagram’s influence-driven algorithms ensure Top Accounts flood users’  
11 feeds almost half the time.<sup>416</sup>

12 316. Score-keeping features designed into Instagram amplify these problems. Teenage  
13 girls are particularly impacted when comparing “Like” counts, follower counts, views, and  
14 comments on their posts to those of models, celebrities, and so-called influencers. Meta’s internal  
15 research reveals that teen girls are eight times more likely to engage in negative social comparison  
16 than their male counterparts.<sup>417</sup>

17 317. Instagram compounds the foregoing problems with yet another pernicious feature—  
18 image “filters” that allow users to engage in selective self-presentation by altering their appearance  
19 in photos and videos. These filters allow facial structure alteration, body slimming, skin lightening,  
20  
21  
22

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23 <sup>413</sup> Haugen\_00015958 at Haugen\_00015992.

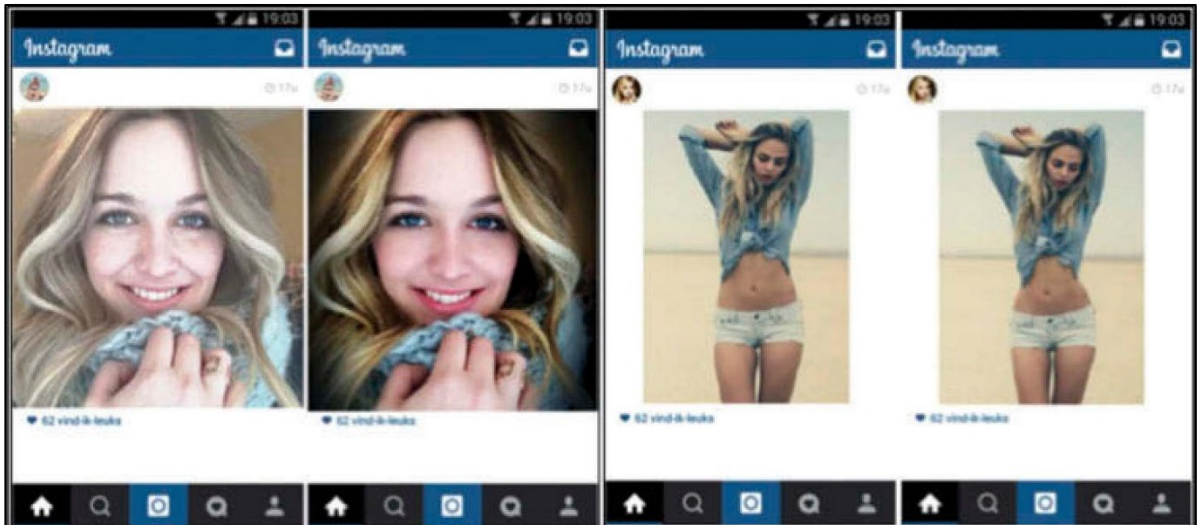
24 <sup>414</sup> Haugen\_00015958 at Haugen\_00015996.

25 <sup>415</sup> Haugen\_00002527 at Haugen\_00002555.

26 <sup>416</sup> META3047MDL-003-00159559 at META3047MDL-003-00159560.

27 <sup>417</sup> Haugen\_00017263 at Haugen\_00017263.

1 skin tanning, blemish clearing, the artificial overlap and augmentation of makeup, and other  
2 beautification “improvements.”<sup>418</sup>



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

14 <sup>419</sup> These filters have harmed Plaintiffs in multiple ways, both independently and in concert with  
15 Instagram’s other defective features.<sup>420</sup>

16 318. *First*, the easy accessibility of filters, combined with features such as “Likes,”  
17 encourage adolescents to artificially change their appearances.<sup>421</sup> As noted, adolescents naturally  
18

19 <sup>418</sup> T. Mustafa, *An ‘Instagram Vs Reality’ filter is showing how toxic photo editing can be*, Metro  
20 (Apr. 30, 2021); <https://metro.co.uk/2021/04/30/an-instagram-vs-reality-tool-is-showing-how-toxic-filters-can-be-14498265/>.

21 <sup>419</sup> Mariska Kleemans, Serena Daalmans, Ilana Carbaat & Doeschka Anschutz (2018) *Picture*  
22 *Perfect: The Direct Effect of Manipulated Instagram Photos on Body Image in Adolescent Girls*,  
23 *21 Media Psychology* 93, 93-110 (2018), <https://www.tandfonline.com/doi/pdf/10.1080/15213269.2016.1257392>.

24 <sup>420</sup> Anna Haines, *From “Instagram Face” to “Snapchat Dysmorphia”*: *How Beauty Filters Are*  
25 *Changing the Way We See Ourselves*, Forbes (Apr. 27, 2021),  
26 <https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff>.

27 <sup>421</sup> Tate Ryan-Mosley, *Beauty Filters Are Changing the Way Young Girls See Themselves*, MIT  
28 Tech. Rev. (Apr. 2, 2021), <https://www.technologyreview.com/2021/04/02/1021635/beauty->

1 seek social validation. When they notice increased interaction and favorable responses to their filter-  
2 edited photos (more “Likes” and comments”), many are led to believe they are only attractive when  
3 their images are edited.<sup>422</sup> These young people, including Plaintiffs, begin to prefer how they look  
4 using filters, not as they appear naturally.<sup>423</sup> In a 2016 study, 52% of girls said they use image filters  
5 every day, and 80% have used an app to change their appearance before age 13.<sup>424</sup> Meta’s own  
6 findings showed teen girls spend hours editing images by altering their appearance before posting  
7 on Instagram,<sup>425</sup> and that “teen girls in particular” are “some of the biggest users of these filters.”<sup>426</sup>  
8 Pictures must be “Instagrammable” to be worthy of posting.

9         319.     *Second*, because Instagram already promotes a high degree of social comparison,  
10 youth, including Plaintiffs, find themselves comparing their real-life appearances to the edited  
11 appearances not only of themselves but of others online.<sup>427</sup> These false and unrealistic body image  
12 standards further lead teenagers, including Plaintiffs, to develop negative perceptions of their  
13

14 \_\_\_\_\_  
15 [filters-young-girls-augmented-reality-social-media/amp/](#).

16 <sup>422</sup> Tate Ryan-Mosley, *Beauty Filters Are Changing the Way Young Girls See Themselves*, MIT  
17 Tech. Rev. (Apr. 2, 2021), <https://www.technologyreview.com/2021/04/02/1021635/beauty-filters-young-girls-augmented-reality-social-media/amp/>.

18 <sup>423</sup> Poojah Shah, *How Social Media Filters Are Affecting Youth*, Parents (Apr. 28, 2022),  
19 <https://www.parents.com/kids/health/childrens-mental-health/how-social-media-filters-are-affecting-youth/>.

20 <sup>424</sup> Anna Haines, *From “Instagram Face” to “Snapchat Dysmorphia”*: *How Beauty Filters Are*  
21 *Changing the Way We See Ourselves*, Forbes (Apr. 27, 2021),  
22 <https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff>.

23 <sup>425</sup> Haugen\_00019219 at Haugen\_00019255.

24 <sup>426</sup> META3047MDL-003-00157020 at META3047MDL-003-00157020.

25 <sup>427</sup> *See Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in*  
26 *the U.S.*, Wall. St. J. (Sept. 29, 2021), <https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf> (explaining that users forget that Instagram  
27 only shows the highlights of people’s lives and is not depicting reality); Haugen\_00019219 at  
28 Haugen\_00019255.

1 appearance. 77% of girls reported trying to change or hide at least one part of their body before  
2 posting a photo of themselves, and 50% believe they did not look good without editing.<sup>428</sup>

3 320. *Third*, the specific changes filters make to an individual’s appearance can cause  
4 negative obsession or self-hatred surrounding aspects of their appearance.<sup>429</sup> The filters alter specific  
5 facial features such as eyes, lips, jaw, face shape, and slimness, which often require medical  
6 intervention to alter in real life.<sup>430</sup> The pervasiveness of Meta-designed filters through the algorithm  
7 permeates Instagram and cause adolescent users to negatively compare their real appearances  
8 against a false physical reality.<sup>431</sup> In one recent study, even users who reported a higher initial self-  
9 esteem level felt they looked 44% worse before their image was edited using a filter.<sup>432</sup> “[W]hen  
10 the . . . filter increased the gap between how participants wanted to look and how they felt they  
11 actually looked, it reduced their self-compassion and tolerance for their own physical flaws.”<sup>433</sup> As  
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14 <sup>428</sup>Anna Haines, *From “Instagram Face” to “Snapchat Dysmorphia”*: How Beauty Filters Are  
15 *Changing the Way We See Ourselves*, Forbes (Apr. 27, 2021),  
<https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff>.

16 <sup>429</sup>Tonya Russell, *Social Media Filters Are Changing How Young People See Themselves*, Teen  
17 Vogue (Jan. 25, 2022), <https://www.teenvogue.com/story/social-media-filters-how-young-people-see-themselves/amp>.

18 <sup>430</sup>Tonya Russell, *Social Media Filters Are Changing How Young People See Themselves*, Teen  
19 Vogue (Jan. 25, 2022), <https://www.teenvogue.com/story/social-media-filters-how-young-people-see-themselves/amp>.

20 <sup>431</sup><https://www.teenvogue.com/story/social-media-filters-how-young-people-see-themselves/amp>  
21 Tonya Russell, *Social Media Filters Are Changing How Young People See Themselves*, Teen  
22 Vogue (Jan. 25, 2022), <https://www.teenvogue.com/story/social-media-filters-how-young-people-see-themselves/amp>.

23 <sup>432</sup>Ana Javornik, Ben Marder, Marta Pizzetti, & Luk Warlop, *Research: How AR Filters Impact  
24 People’s Self-Image*, Harvard Business Review (December 22, 2021),  
25 <https://hbr.org/2021/12/research-how-ar-filters-impact-peoples-self-image>.

26 <sup>433</sup><https://hbr.org/2021/12/research-how-ar-filters-impact-peoples-self-image> Ana Javornik, Ben  
27 Marder, Marta Pizzetti, & Luk Warlop, *Research: How AR Filters Impact People’s Self-Image*,  
28 Harvard Business Review (December 22, 2021), <https://hbr.org/2021/12/research-how-ar-filters-impact-peoples-self-image>.

1 one psychodermatologist has summed it up, “these apps subconsciously implant the notion of  
2 imperfection and ugliness, generating a loss of confidence.”<sup>434</sup>

3 321. *Fourth*, Meta has intentionally designed its product to not alert adolescent users when  
4 images have been altered through filters or edited. Meta has therefore designed its product so that  
5 users, including Plaintiffs, cannot know which images are real and which are fake, deepening  
6 negative appearance comparison.

7 322. *Fifth*, heavily edited and unrealistic beauty, modeling, fitness, talent, and success  
8 related content is highly amplified by Meta’s algorithms, especially on the Feeds of young users. As  
9 children become addicted to Meta’s products, their Feeds become their world. When it appears  
10 everyone in their world is better-looking, happier, and more successful than them, their comparison-  
11 prone psychology suffers greatly.

12 323. Social comparisons on social media are frequent and are especially likely to be  
13 upward, as social media provides a continuous stream of information about other people’s  
14 accomplishments. Research suggests that social comparisons occur automatically; when individuals  
15 encounter information about another person, their self-perceptions will be affected. The sheer  
16 number of posts in a News Feed, each offering a thumbnail sketch of each person’s carefully curated  
17 and predominantly ostentatious content, yields numerous opportunities for social comparison.  
18 Although people do not typically post false information about themselves online, they engage in  
19 selective self-presentation. They are encouraged through the intentional design of Meta’s algorithm  
20 to post eye-catching content. As a result, individuals browsing their News Feeds are more likely to  
21 see posts about friends’ exciting social activities rather than dull days at the office, affording  
22 numerous opportunities for comparisons to people seemingly better-off. Individuals with vacillating  
23 levels of self-esteem and certitude, characteristics notoriously endemic to the adolescent cohort, are  
24 particularly oriented to making frequent and extreme upward social comparisons on social media,  
25 which in turn threatens their mental health. Social-media-induced social comparison often results in

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27 <sup>434</sup> Genesis Rivas, *The Mental Health Impacts of Beauty Filters on Social Media Shouldn’t Be*  
28 *Ignored – Here’s Why*, InStyle (Sept. 14, 2022), <https://www.instyle.com/beauty/social-media-filters-mental-health>.

1 a discrepancy between the ideal self and the real self, thus evoking a sense of depression,  
2 deprivation, and distress, resulting in an overall aggravation of a person’s mental state. Since the  
3 early 2000s, studies have shown that frequent upward social comparison results in lower self-esteem  
4 and reduced overall mental health. It is well-established that individuals who are more likely to  
5 engage in self-comparison are likewise more likely to suffer harm when using social media. Meta’s  
6 defective design has amplified this dynamic to psychologically harmful levels, as discussed in  
7 further detail below.

8         324. The impact of the negative social and appearance comparison caused by Meta’s  
9 defective product features is profound. Instagram-induced social comparison creates a schism  
10 between the ideal self and the real self, leading to distress and depression. Filters, especially in  
11 combination with other product features, cause body image issues, eating disorders, body  
12 dysmorphia, and related harms.<sup>435</sup>

13         325. Again, Meta has long been aware of the harms Instagram inflicts on youth by  
14 perpetuating social comparison to unrealistic beauty standards. In one study from 2019, teens ages  
15 13-17 explained that Instagram harms their mental health by creating pressure to conform to social  
16 stereotypes and match the body shapes of influencers, the need for validation through views, “Likes”  
17 and followers, and the over-sexualization of girls.<sup>436</sup> Meta’s analysis categorized the documented  
18 harms into three categories: impacts from comparison to others, the pressure of looks/behaviors, and  
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21 <sup>435</sup> See Sian McLean, Susan Paxton, Eleanor Wertheim, & Jennifer Masters, *Photoshopping the*  
22 *Selfie: Self Photo Editing and Photo Investment Are Associated with Body Dissatisfaction in*  
23 *Adolescent Girls*, 48 Int’l J. of Eating Disorders 1132, 1133 (Aug. 27, 2015),  
24 <https://pubmed.ncbi.nlm.nih.gov/26311205/> (presenting a 2015 study involving 101 adolescent  
25 girls, which found that more time spent editing and sharing selfies on social media raised their risk  
26 of experiencing body dissatisfaction and disordered eating habits.); Scott Griffiths, Stuart Murray,  
27 Isabel Krug, & Sian McLean, *The Contribution of Social Media to Body Dissatisfaction, Eating*  
*Disorder Symptoms, and Anabolic Steroid Use Among Sexual Minority Men*, 21 *Cyberpsychology*  
*Behavior, and Soc. Networking* 149, 149 (Mar. 1, 2018),  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5865626/>.

28 <sup>436</sup> Haugen\_00017069 at Haugen\_00017122.



1 from others' behaviors. These impacts were associated with isolation, unhealthy eating habits,  
2 depression, anxiety, insecurity, and loneliness.<sup>437</sup>

3 326. In its "Social Comparison Exploratory Research" conducted in 2020, Meta  
4 acknowledged that body image comparisons are formed in part by its defective product features—  
5 filters that flood its app with seemingly unattainable looks like flawless skin, made worse by posters  
6 "using hashtags like no-filters but actually using filters."<sup>438</sup> Meta's researchers found that nearly  
7 half of teen girls on Instagram feel like they often or always compare their appearance to others  
8 using the product, and more than one-third feel extreme pressure to look perfect on Instagram.<sup>439</sup> In  
9 a related survey, Meta found that around the age of 30, the role of Instagram in social comparison  
10 begins to diminish.<sup>440</sup>

11 327. According to research conducted by Meta in 2019, over 60% of teens believe  
12 Instagram should help them address the effects of social comparison by recommending positive  
13 accounts, reprioritizing their feeds to promote healthy accounts, and help them follow a balance of  
14 accounts.<sup>441</sup> One in three teens wished Instagram gave them better user controls.<sup>442</sup> Yet a survey  
15 conducted two years later revealed that Meta had done little to address its users' concerns. Topics  
16 that elicited social comparison still encompassed over one-third of teen girls' feeds. And for every  
17 post from a friend that appeared in a teen girl's feed, Instagram's algorithm drove five times as much  
18 content from popular accounts.<sup>443</sup>

19 \_\_\_\_\_  
20 <sup>437</sup> Haugen\_00017069 at Haugen\_00017126.

21 <sup>438</sup> *See Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in*  
22 *the U.S.*, Wall. St. J. (Sept. 29, 2021), [https://s.wsj.net/public/resources/documents/teen-girls-](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf)  
23 [body-image-and-social-comparison-on-instagram.pdf](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf) *Supra*; Haugen\_00015958 at  
Haugen\_00015971- Haugen\_00015977.

24 <sup>439</sup> Haugen\_00007080 at Haugen\_00007082.

25 <sup>440</sup> Haugen\_00007080 at Haugen\_00007095.

26 <sup>441</sup> Haugen\_00017069 at Haugen\_00017145.

27 <sup>442</sup> Haugen\_00020135 at Haugen\_00020171.

28 <sup>443</sup> Haugen\_00002527 at Haugen\_00002527.



1           328. One slide from Meta’s study of social comparison offers a particularly succinct  
2 summation of how the various product defects built into Instagram “exacerbate each other to create  
3 a perfect storm.”<sup>444</sup> “Posting ‘For the Gram’” creates a “Pressure to Look Perfect.”<sup>445</sup> The ability of  
4 influencers to “Monetiz[e] face + body” creates a “Highlight Reel Norm.”<sup>446</sup> And the “Vortex of  
5 Feed + Profile and Explore” promotes a “Hate to love” dynamic for users, which “Feed[s] the Spiral”  
6 of compulsive use.<sup>447</sup> Taken together, these three features—all driven by design features of  
7 Instagram—create a “Social Comparison Sweet Spot.”<sup>448</sup>

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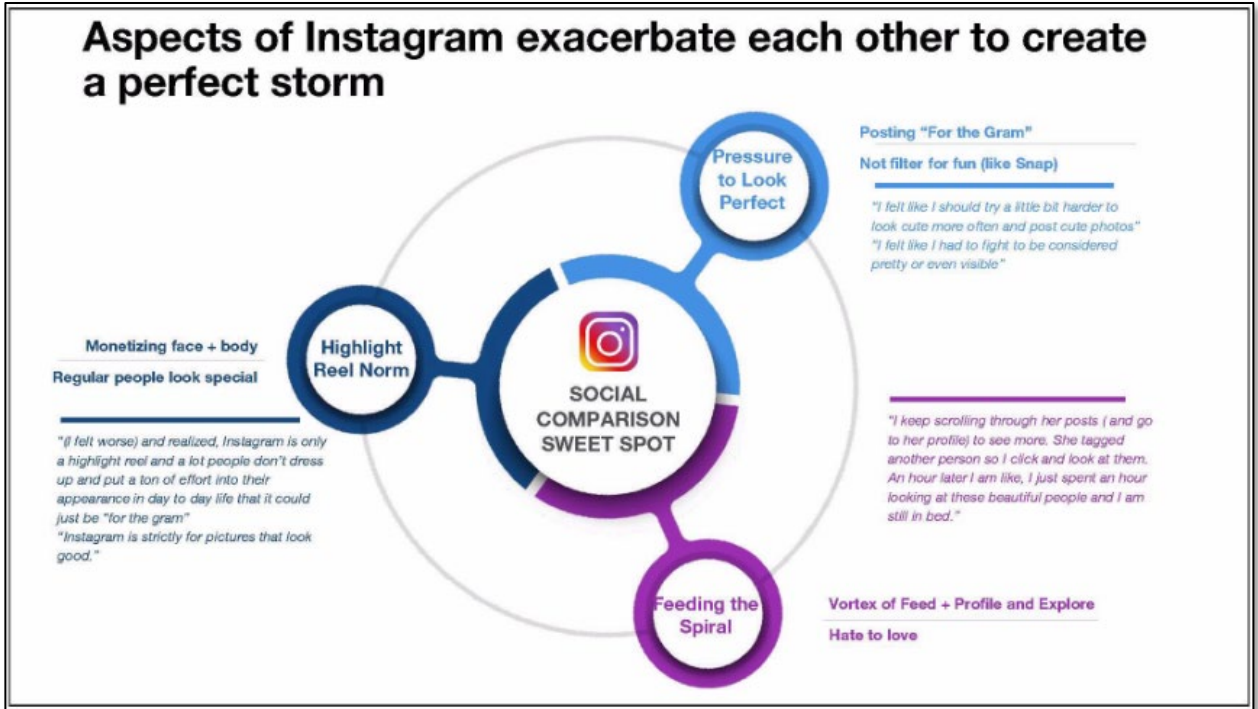
18 <sup>444</sup> See *Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in*  
19 *the U.S.*, Wall. St. J. (Sept. 29, 2021), [https://s.wsj.net/public/resources/documents/teen-girls-](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf)  
[body-image-and-social-comparison-on-instagram.pdf](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf); Haugen\_00015958 at Haugen\_00015991.

20 <sup>445</sup> See *Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in*  
21 *the U.S.*, Wall. St. J. (Sept. 29, 2021), [https://s.wsj.net/public/resources/documents/teen-girls-](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf)  
[body-image-and-social-comparison-on-instagram.pdf](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf); Haugen\_00015958 at Haugen\_00015991.

22 <sup>446</sup> See *Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in*  
23 *the U.S.*, Wall. St. J. (Sept. 29, 2021), [https://s.wsj.net/public/resources/documents/teen-girls-](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf)  
[body-image-and-social-comparison-on-instagram.pdf](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf); Haugen\_00015958 at Haugen\_00015991.

24 <sup>447</sup> See *Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in*  
25 *the U.S.*, Wall. St. J. (Sept. 29, 2021), [https://s.wsj.net/public/resources/documents/teen-girls-](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf)  
[body-image-and-social-comparison-on-instagram.pdf](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf); Haugen\_00015958 at Haugen\_00015991.

26 <sup>448</sup> See *Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in*  
27 *the U.S.*, Wall. St. J. (Sept. 29, 2021), [https://s.wsj.net/public/resources/documents/teen-girls-](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf)  
[body-image-and-social-comparison-on-instagram.pdf](https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf); Haugen\_00015958 at Haugen\_00015991.



329. Finally, Meta understands that the social comparison it knowingly enables through appearance filters creates compulsive behavior among child users, especially when paired with other defects such as “Likes” and algorithmic recommendations. Specifically, Meta knows that social comparison creates a negative feedback loop.<sup>449</sup> Its internal research reveals that, as teens compare themselves to others, their self-doubt grows, which in turn heightens the degree of attention they give these feelings. As these effects compound, teens experience depression and anxiety, making them more vulnerable and susceptible to harmful content.<sup>450</sup> Meta observed that long-term, constant self-critique and scrutiny permanently shapes how teens view themselves in all relationships, on and offline.<sup>451</sup> Moreover, they found that the incessant social pressure Instagram inflicted on teens led to obsessive control and attention-seeking behavior to obtain social validation.<sup>452</sup> In other words,

<sup>449</sup> Haugen\_00017069 at Haugen\_00017127.

<sup>450</sup> Haugen\_00017069 at Haugen\_00017127.

<sup>451</sup> Haugen\_00017069 at Haugen\_00017130.

<sup>452</sup> Haugen\_00017069 at Haugen\_00017127.

1 Instagram’s design features resulted in an insidious cycle of harm where teens believed they could  
2 only find reprieve by increased Instagram use.

3 330. Meta has the technological capabilities to mitigate social comparison harms  
4 significantly, but actively chooses to ignore leading research (including its own) and its product  
5 engineers’ recommendations. One internal presentation recommended several “targeted  
6 interventions” for changes to Instagram that could mitigate these harms, such as a recommendation  
7 that users take a break during a long use session.<sup>453</sup> In another, computational social researchers and  
8 engineers at Meta proposed numerous, feasible product design changes, including: demotions on  
9 Explore and Reels using topic and image and video features from an FB Learner model, separating  
10 top-account feed from close-friend feed, and not recommending celebrities to follow that post  
11 primarily fashion/beauty content as users “can find these accounts on their own, but [Meta]  
12 shouldn’t amplify their influence through recommendations.”<sup>454</sup>

13 331. Despite its vast knowledge of the harms that Instagram’s defective product features  
14 were causing to adolescents, in Meta’s 2021 Milestone Tracker, the action item of reducing the  
15 negative effects from social comparison through controls had yet to be started.<sup>455</sup> In other words,  
16 despite awareness that the deliberate design of Instagram was drastically damaging teen mental and  
17 physical health, Meta ignored the problem, failing to implement its own researchers’  
18 recommendations.

19 **f. Facebook’s and Instagram’s defective features include**  
20 **impediments to discontinuing use.**

21 332. Once the addicted child realizes the injury Meta’s products are inflicting, and wants  
22 to quit using, Meta shifts the full force of its genius product design teams to prevent the child’s  
23 escape. Meta has intentionally and defectively designed its products so that adolescent users,  
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26 <sup>453</sup> Haugen\_00019219 at Haugen\_00019272.

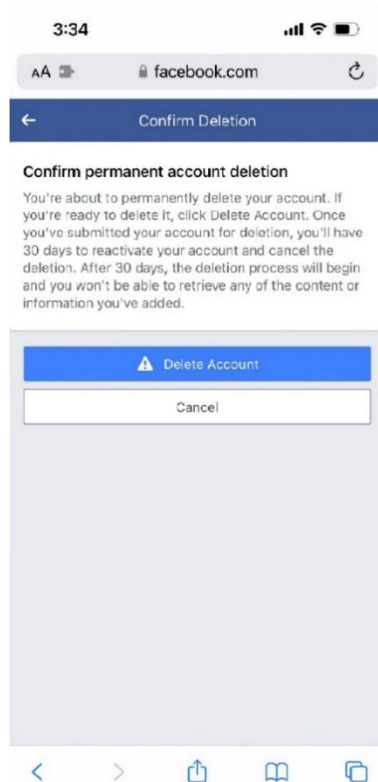
27 <sup>454</sup> Haugen\_00002527 at Haugen\_00002565.

28 <sup>455</sup> Haugen\_00025741 at Haugen\_00025763.

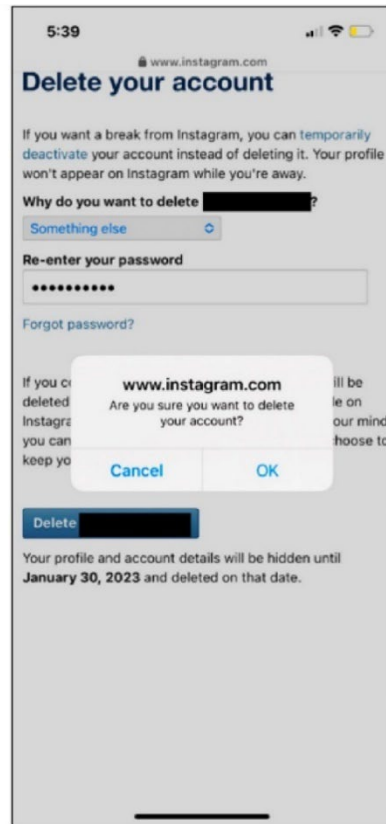
1 including Plaintiffs, face significant navigational obstacles and hurdles when trying to delete or  
2 deactivate their accounts, in contrast to the ease with which users can create those accounts.

3 333. Currently, to delete or deactivate an Instagram or Facebook account, a user must  
4 locate and tap on approximately seven different buttons (through seven different pages and popups)  
5 from the main feed. Some Plaintiffs have given up in their attempt to quit because it was too difficult  
6 to navigate through the interface to completion.

7 334. Even if a user successfully navigates these seven pages, Meta still won't immediately  
8 delete their account. Instead, Meta preserves the account for 30 more days. If at any time during  
9 those 30 days a user's addictive craving becomes overwhelming and they access the account again,  
10 the deletion process starts over. The user must go through all the above steps again, including the  
11 30-day waiting period, if they again wish to delete their account.



(Facebook Final Deletion Screen  
February 2023)



(Instagram Final Deletion Screen,  
January 2023)(account name  
redacted)

1 335. Moreover, the deletion process includes what Meta readily acknowledges are  
2 “aggressive” attempts to dissuade users from deleting their accounts.<sup>456</sup> Before a user can delete  
3 their Facebook account, Meta “lists some of your friends to remind you that they will no longer be  
4 able to contact you through the site and more importantly, [requires] the user to choose a reason for  
5 why they’re leaving.”<sup>457</sup> Meta also requires users attempting to leave Instagram to select a reason  
6 why they are leaving.

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

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

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

19 338. Meta has engaged in a years-long pattern of concealing critical information about the  
20 safety of Instagram and Facebook from the public, including Plaintiffs and their parents. In one  
21 internal document from February 2018, employees at Meta communicated about how best to  
22 “refin[e] counter-messaging around the addiction narrative that’s been propagating.” This effort to  
23 conduct “message testing around addiction PR responses” included the ideas that “[t]he whole  
24 dopamine thing is completely made up and based on no research,” “[t]here’s no agreement on what  
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26 \_\_\_\_\_  
27 <sup>456</sup> Haugen\_00016893 at Haugen\_0001689398.

28 <sup>457</sup> Haugen\_00016893 at Haugen\_0001689398.

1 is meant by addiction,” and (contradictorily) “[w]e’re taking it seriously, doing research, [and]  
2 launching new tools to help people.”<sup>458</sup>

3 339. Meta knew that none of this was true. For instance, in the summer of 2019,  
4 Zuckerberg met with a psychologist and leading expert on the mental health effects of social media  
5 on young people. This leading expert countered Zuckerberg’s contention that harms from social  
6 media are trivial and explained how, to the contrary, Instagram and other products have been a major  
7 contributor to the spike in young girls’ mental health problems since 2012. The psychologist  
8 addressed his research “on the dramatic rise in rates of teenage anxiety, depression, and self-harm”  
9 and explained how the research on social media’s role “points heavily to a connection, not just from  
10 correlational studies but from true experiments, which strongly indicate[s] causation, not just  
11 correlation.”<sup>459</sup>

12 340. Instead of “taking [this] seriously” and “launching new tools” to protect kids,<sup>460</sup> Meta  
13 did the opposite. By late 2019, Meta’s “mental health team stopped doing things,” “it was defunded”  
14 and “completely stopped.”<sup>461</sup> And, as noted, Meta allowed safety tools it knew were broken to be  
15 held out as fixes.<sup>462</sup> All the while, Meta ignored cries from their well-being researchers to  
16 aggressively confront its youth safety problem: “[T]here’s so much more we could have done  
17 here ... [but] there was the explicit decision last half not to fund this anymore.”<sup>463</sup>

18 341. Despite knowing better, Meta’s high-ranking executives then began pushing  
19 intentionally misleading talking points to the public. Instead of informing the public about Meta’s

20 \_\_\_\_\_  
21 <sup>458</sup> META3047MDL-003-00082165 at META3047MDL-003-00082165- META3047MDL-003-  
22 00082165.

23 <sup>459</sup> META3047MDL-003-00089174 at META3047MDL-003-00089176.

24 <sup>460</sup> META3047MDL-003-00082165 at META3047MDL-003-00082165- META3047MDL-003-  
25 00082165.

26 <sup>461</sup> META3047MDL-003-00011697 at META3047MDL-003-00011698.

27 <sup>462</sup> See Haugen\_00012303 at Haugen\_00012314.

28 <sup>463</sup> META3047MDL-003-00103260 at META3047MDL-003-00103260.

1 internal research demonstrating Instagram’s and Facebook’s negative impacts on the health and  
2 well-being of the nation’s youth, Meta repeatedly omitted key facts and misrepresented its products  
3 in service of an overall message touting the safety of its products for children.

4 342. Because of Meta’s concealment, Plaintiffs, Consortium Plaintiffs, the public, and  
5 Congress were left in the dark and reasonably relied on Meta’s reassurances. Had Meta disclosed  
6 the truth regarding its products, Plaintiffs and Consortium Plaintiffs would have been able to avoid  
7 or mitigate the harms they ultimately suffered by using Meta’s products. Instead, Meta pursued a  
8 knowing pattern of concealment to Plaintiffs’ detriment.

9 343. In the year leading up to Meta’s acquisition of Instagram, Meta publicly  
10 acknowledged its duty to children and worked to create false expectations about its products’ safety.

11 For example::

12 a. Zuckerberg (3/25/2011): “So, we’re really focused on, on safety, especially  
13 children’s safety. So we’re having folks under the age of 18, um we, we just  
14 take a lot of extra precautions for it, to make sure that it’s just a safe  
15 environment for them um, to use this service that you know, the default for,  
16 for people sharing things isn’t that they’re sharing with everyone but that  
17 they’re sharing with a smaller community ... But I think, I think that’s a lot  
18 of it. We really try to build a safe environment. Um, and um, that’s gonna be  
19 the key long term.”<sup>464</sup>

20 b. Zuckerberg (3/25/2011): “Right, and they, they feel like Facebook is this  
21 really secure place and that it’s a hundred percent safe, and um, we’re always  
22 thinking about little and big things like that that we can do to keep it safe for,  
23 for the people who use our service.”<sup>465</sup>

24 c. Zuckerberg (5/25/2011): “I mean, we do not allow people under the age of  
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26 <sup>464</sup> *Mark Zuckerberg at BYU with Senator Orrin Hatch*, YouTube, March 25, 2011,  
<http://www.youtube.com/watch?v=zRsbW0mmvNo>.

27 <sup>465</sup> *Mark Zuckerberg at BYU with Senator Orrin Hatch*, YouTube, March 25, 2011,  
28 <http://www.youtube.com/watch?v=zRsbW0mmvNo>.

1 13 to sign up and I think if we ever were, we would need to try to figure out  
2 a lot of ways to make sure that they were safe, right, because that’s just  
3 extremely important and that’s just not the top of the list in terms of things  
4 for us to figure out right now.”<sup>466</sup>

5 344. Following Meta’s acquisition of Instagram, high-ranking executives continued to  
6 make public pronouncements about the safety of Meta’s products, including, but not limited to, the  
7 following statements:

8 a. Zuckerberg (12/1/2015): “We will do our part to make this [better world]  
9 happen, not only because we love you, but also because we have a moral  
10 responsibility to all children in the next generation.”<sup>467</sup>

11 b. Zuckerberg (4/11/2018): “Congressman, we have a number of measures in  
12 place to protect minors specifically. We make it so that adults can’t contact  
13 minors who they - they aren’t already friends with. We make it so that certain  
14 content that may be inappropriate for minors, we don’t show.”<sup>468</sup>

15 c. Zuckerberg (4/10/2018): when asked by members of the U.S. Senate  
16 Committee on Commerce, Science, and Transportation whether his  
17 companies “[h]ire consulting firms to help them figure out how to get more  
18 dopamine feedback loops so that people don’t want to leave the platform”:  
19 “No . . . that’s not how we talk about this or how we set up our product teams.  
20 We want our products to be valuable to people, and if they’re valuable, then  
21  
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23 <sup>466</sup> Maurice Levy, *Conversation with Mark Zuckerberg at E-G8 Forum*, YouTube, May 25, 2011,  
24 <http://www.youtube.com/watch?v=Gy0bq9FAJR>.

25 <sup>467</sup> Mark Zuckerberg, Facebook (Dec. 1, 2015), <https://www.facebook.com/zuck/posts/10153375081581634>.

26 <sup>468</sup> *Transcript of Zuckerberg’s appearance before House committee*, Wash. Post (April 11, 2018)  
27 [https://www.washingtonpost.com/news/the-switch/wp/2018/04/11/transcript-of-zuckerbergs-appearance-before-house-committee/?utm\\_term=.e7b476fb8ac7&noredirect=on](https://www.washingtonpost.com/news/the-switch/wp/2018/04/11/transcript-of-zuckerbergs-appearance-before-house-committee/?utm_term=.e7b476fb8ac7&noredirect=on).  
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people choose to use them.”<sup>469</sup>

d. Zuckerberg (7/12/2018): “There are really two core principles at play here. There’s giving people a voice, so that people can express their opinions. Then, there’s keeping the community safe, which I think is really important.”<sup>470</sup>

e. Zuckerberg (7/25/2018): “[W]e will continue to invest heavily in security and privacy because we have a responsibility to keep people safe. But as I’ve said on past calls, we’re investing so much in security that it will significantly impact our profitability.”<sup>471</sup>

f. Zuckerberg (8/21/2018): “One of the most important responsibilities we have as a company is to keep people safe and stop anyone from abusing our service.”<sup>472</sup>

g. Zuckerberg (9/7/2018): “What I’ve learned so far is that when you build services that are used by billions of people across countries and cultures, you will see all of the good humanity is capable of, and people will try to abuse those services in every way possible. It is our responsibility to amplify the good and mitigate the bad.”<sup>473</sup>

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<sup>469</sup> *Facebook, Social Media Privacy, and the Use and Abuse of Data: Hearing Before the S. Comm. on Commerce, Sci., and Transp. and H. Comm’s on the Judiciary and Commerce, Sci., and Transp., 115th Cong.* (Apr. 10, 2018), <https://www.commerce.senate.gov/2018/4/facebook-social-media-privacy-and-the-use-and-abuse-of-data>.

<sup>470</sup> Kara Swisher, *Zuckerberg: The Record Interview*, Vox (July 12, 2018) <https://www.vox.com/2018/7/18/17575156/mark-zuckerberg-interview-facebook-recode-kara-swisher>.

<sup>471</sup> *Facebook, Inc., Second Quarter 2018 Results Conference Call* (July 25, 2018) [https://s21.q4cdn.com/399680738/files/doc\\_financials/2018/Q2/Q218-earnings-call-transcript.pdf](https://s21.q4cdn.com/399680738/files/doc_financials/2018/Q2/Q218-earnings-call-transcript.pdf).

<sup>472</sup> Mark Zuckerberg, Facebook (Aug. 21, 2018), [https://www.facebook.com/zuck/posts/10105188590724391?\\_tn\\_ =K-R](https://www.facebook.com/zuck/posts/10105188590724391?_tn_ =K-R).

<sup>473</sup> Mark Zuckerberg, Facebook (Sept. 7, 2018), [https://www.facebook.com/zuck/posts/10105224999156601?\\_xts\\_%5B0%5D=68.ARB273c8TJ](https://www.facebook.com/zuck/posts/10105224999156601?_xts_%5B0%5D=68.ARB273c8TJ)

- 1 h. Zuckerberg (11/15/2018): “[W]e have a responsibility to keep people safe on  
2 our services -- whether from terrorism, bullying, or other threats.”<sup>474</sup>
- 3 i. Zuckerberg (1/1/2019): “We ended 2018 with more than 30,000 people  
4 working on safety and security -- up from 10,000 people a couple of years  
5 ago.”<sup>475</sup>
- 6 j. Zuckerberg (1/30/2019): “[O]n all the content and safety and security issues,  
7 there’s more to do here but I’m proud of the work that we have done to get  
8 in front of a lot more of these issues.”<sup>476</sup>
- 9 k. Zuckerberg (3/30/2019): “[W]e have a responsibility to keep people safe on  
10 our services.”<sup>477</sup>
- 11 l. Zuckerberg (4/24/2019): “You should expect we’ll do everything we can to  
12 keep you safe on our services, within the bounds of an encrypted service.”<sup>478</sup>
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16 [kMqNAclfl-i0UB6fVWHZ\\_hO4k0KASCy8XfVdyC9XEVqoPLsPUPDh94zSHboQiB1t3mSIP9  
17 yEUyjvaEF50UxoUqVca4ZcM4nnkQ3MWz3dBGRQYm7IJMj\\_Cbl25p7a9-HX-aXjkjNdS21Xza  
18 ATHg9PfrzJ\\_dTLszwUZ3H6b3Q4biIc&\\_\\_tn\\_.](https://www.facebook.com/notes/mark-zuckerberg/a-blueprint-for-content-governance-and-enforcement/10156443129621634/)

19 <sup>474</sup> Mark Zuckerberg, Facebook (Nov. 15, 2018), [https://www.facebook.com/notes/mark-  
zuckerberg/a-blueprint-for-content-governance-and-enforcement/10156443129621634/.](https://www.facebook.com/notes/mark-zuckerberg/a-blueprint-for-content-governance-and-enforcement/10156443129621634/)

20 <sup>475</sup> Meta Investor Relations, *Earnings Call Transcript*, Meta (Jan. 1, 2019),  
21 [https://investor.fb.com/investor-events/event-details/2019/Facebook-Q4-2018-  
22 Earnings/default.aspx.](https://investor.fb.com/investor-events/event-details/2019/Facebook-Q4-2018-Earnings/default.aspx)

23 <sup>476</sup> Meta Investor Relations, *Earnings Call Transcript*, Meta (Jan. 30, 2019),  
[https://investor.fb.com/financials/default.aspx.](https://investor.fb.com/financials/default.aspx)

24 <sup>477</sup> Mark Zuckerberg, *Mark Zuckerberg: The Internet needs new rules. Let’s start in these four  
25 areas*, Wash. Post (March 30, 2019), [https://www.washingtonpost.com/opinions/mark-  
26 zuckerberg-the-internet-needs-new-rules-lets-start-in-these-four-areas/2019/03/29/9e6f0504-521a-  
11e9-a3f7-78b7525a8d5f\\_story.html?noredirect=on.](https://www.washingtonpost.com/opinions/mark-zuckerberg-the-internet-needs-new-rules-lets-start-in-these-four-areas/2019/03/29/9e6f0504-521a-11e9-a3f7-78b7525a8d5f_story.html?noredirect=on)

27 <sup>478</sup> Mark Zuckerberg, Facebook (April 24, 2019),  
28 [https://www.facebook.com/zuck/posts/10107243286682221.](https://www.facebook.com/zuck/posts/10107243286682221)

- 1 m. Sheryl Sandberg (1/29/2020): “[We] have to keep people safe and give them  
2 control over their experience on our apps. And we are.”<sup>479</sup>
- 3 n. Sheryl Sandberg (10/29/2020): “While we continue to invest in helping  
4 businesses, we are equally focused on keeping our platform safe.”<sup>480</sup>
- 5 o. Meta (12/23/2020), when asked by the Senate Committee on the Judiciary  
6 whether it could “determine whether increased use of their platform among  
7 teenage girls has any correlation with increased signs of depression [or  
8 anxiety]”: “No.” And, when asked what research Meta had conducted  
9 internally on the mental health impacts of social media use: “[t]he effects of  
10 social media are still being studied.”<sup>481</sup>
- 11 p. Zuckerberg (3/25/21), when asked by members of the U.S. House of  
12 Representatives Committee on Energy and Commerce, “Do you believe that  
13 your platform harms children?”: “I don’t believe so. This is something that  
14 we study and we care a lot about; designing products that improve peoples’  
15 well-being is very important to us. And what our products do is help people  
16 stay connected to people they care about, which I think is one of the most  
17 fundamental and important human things that we do, whether that’s for teens  
18 or for people who are older than that.”<sup>482</sup>

19 \_\_\_\_\_  
20 <sup>479</sup> Meta Investor Relations, *Earnings Call Transcript*, Meta (Jan. 29, 2020),  
<https://investor.fb.com/investor-events/default.aspx>.

21 <sup>480</sup> Meta Investor Relations, *Earnings Call Transcript*, Meta (Oct. 29, 2020),  
22 <https://investor.fb.com/investor-events/default.aspx>.

23 <sup>481</sup> *Facebook, Inc. Responses to Questions for the Record from the Comm. on the Judiciary*  
24 *November 17, 2020 Hearing: Breaking the News: Censorship, Suppression, and the 2020*  
*Election*, at 124-125 (December 23, 2020), available at  
25 <https://www.judiciary.senate.gov/imo/media/doc/Zuckerberg%20Responses%20to%20QFRs.pdf>.

26 <sup>482</sup> *Disinformation Nation: Social Media’s Role in Promoting Extremism and Misinformation*  
27 *Hearing Before H. Energy and Commerce Subcomm. on Communications and Technology* (March  
28 25, 2021), available at <https://www.congress.gov/117/meeting/house/111407/documents/HHRG-117-IF16-Transcript-20210325.pdf>.

1 q. David Wehner, Chief Financial Officer of Meta (4/28/2021): “I mean, the  
2 only thing I’d add . . . is that, I think more than anyone else in the industry,  
3 we invest on the safety and security side to sort of keep bad content off the  
4 site before it gets ranked and put into what people see. So we’ve got 35,000  
5 -- over 35,000 people on the safety and security side. We’ve got the most  
6 robust set of content policies out there. We do a quarterly call, public call  
7 around our content review process and procedures. So I think that on the  
8 front, before it even gets into the algorithm, I think we really do more than  
9 anyone else in the industry on the safety and security front to prevent things  
10 like misinformation and a bad content going into the system in the first  
11 place.”<sup>483</sup>

12 r. Adam Mosseri (5/2021): in statement to reporters, dismissing concerns  
13 around Instagram’s negative impact on teens as “quite small.”<sup>484</sup>

14 345. On each of the above occasions, and on many others, Meta touted the safety of its  
15 products; it could have but failed to disclose information it knew concerning the significant risks  
16 associated with its products, even though it knew that the public lacked access to this information.  
17 For instance, in a December 2019 memo, Meta's Chief Technology Officer remarked that the media  
18 has “limited information to work with” about the company and that this limitation is by Meta’s “own  
19 design.”<sup>485</sup>

20 346. Meta’s pattern of intentional concealment came to a head in August 2021, just weeks  
21 before Frances Haugen dropped her bombshell revelations on the public. On August 4, 2021,

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23 <sup>483</sup> Meta Investor Relations, *Earnings Call Transcript*, Meta (April 28, 2021),  
24 [https://investor.fb.com/investor-events/event-details/2021/Facebook-Q1-2021-Earnings-  
/default.aspx](https://investor.fb.com/investor-events/event-details/2021/Facebook-Q1-2021-Earnings-default.aspx).

25 <sup>484</sup> Taylor Hatmaker, *Facebook Knows Instagram Harms Teens. Now its Plan to Open the App to  
26 Kids Looks Worse than Ever*, TechCrunch (Sept. 16, 2021), available at  
<https://techcrunch.com/2021/09/16/facebook-instagram-for-kids-mosseri-wsj-teen-girls/>.

27 <sup>485</sup> Haugen\_00007350 at Haugen\_00007350 (Dec. 30, 2019 memo by Andrew Bosworth regarding  
28 “Thoughts for 2020”).

1 Senators Marsha Blackburn and Richard Blumenthal wrote to Mark Zuckerberg. The Senators’ letter  
2 observed that “[a]n expanding volume of scientific research shows that social media platforms can  
3 have a profoundly harmful impact on young audiences,” and noted “grave concerns about [Meta’s]  
4 apparent effort to ensnare children into social media platforms at earlier and earlier ages.”<sup>486</sup> The  
5 letter concluded by asking Zuckerberg six “pretty straightforward questions about how the company  
6 works and safeguards children and teens on Instagram.”<sup>487</sup>

7 347. In its August 17, 2021 written response to Senators Blackburn and Blumenthal, Meta  
8 omitted any reference to the internal research it had conducted demonstrating the negative impact  
9 Instagram can have on kids’ mental health.<sup>488</sup>

10 348. The Senators’ letter asked whether Meta had ever developed products or features  
11 “that it had reason to believe could have a negative effect on children’s and teens’ mental health or  
12 well-being.”<sup>489</sup> Meta responded by claiming it had “built many special protections for teens.”<sup>490</sup> But  
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15 <sup>486</sup> Letter from Richard Blumenthal, U.S. Senator, to Mark Zuckerberg, Chief Executive Officer of  
16 Facebook (Aug. 4, 2021), *available at*  
<https://www.blumenthal.senate.gov/imo/media/doc/8.4.21%20-%20Facebook%20-%20Mental%20Health%20and%20Kids%20Letter.pdf>.

17 <sup>487</sup> *Protecting Kids Online: Testimony from a Facebook Whistleblower Hearing before Subcomm.*  
18 *On Consumer Protection, Product Safety, and Data Security* (Oct. 5, 2021), *available at*  
19 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>; *See also*, Letter from Richard Blumenthal, U.S. Senator, to  
20 Mark Zuckerberg, Chief Executive Officer of Facebook (Aug. 4, 2021), *available at*  
21 <https://www.blumenthal.senate.gov/imo/media/doc/8.4.21%20-%20Facebook%20-%20Mental%20Health%20and%20Kids%20Letter.pdf>.

22 <sup>488</sup> Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S.  
23 Senator (Aug. 17, 2021),  
<https://www.blumenthal.senate.gov/imo/media/doc/817.21facebookresponseletter.pdf>.

24 <sup>489</sup> Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S.  
25 Senator 4 (Aug. 17, 2021),  
<https://www.blumenthal.senate.gov/imo/media/doc/817.21facebookresponseletter.pdf>.

26 <sup>490</sup> Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S.  
27 Senator 4 (Aug. 17, 2021),  
28 <https://www.blumenthal.senate.gov/imo/media/doc/817.21facebookresponseletter.pdf>.

1 it failed to mention, for example, that it employed “growth hackers” who internally advised, “we  
2 can be very aggressive with our notifications to create a habit.”<sup>491</sup>

3 349. The Senators’ letter also asked if Meta’s research had “ever found that its platforms  
4 and products can have a negative effect on children’s and teens’ mental health or well-being.”<sup>492</sup>  
5 Meta responded that the matter was “still being studied,”<sup>493</sup> that it was challenging to conduct such  
6 research,<sup>494</sup> and that the company was “not aware of a consensus among studies or experts about  
7 how much screen time is ‘too much.’”<sup>495</sup> While Meta reiterated its vague and already public position  
8 that “passive” use of social media can correlate with “negative outcomes,”<sup>496</sup> it failed to disclose  
9 any more specific findings.<sup>497</sup>

10 350. Meta should have, but intentionally did not, responded to the Senators’ question by  
11 disclosing its detailed research regarding addiction to its products, which the company terms

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13 <sup>491</sup> Haugen\_00016893 at Haugen\_00016914 (Aug. 3, 2017 memo entitled “Have we made people  
addicted to Facebook?”).

14 <sup>492</sup> Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S.  
15 Senator 2 (Aug. 17, 2021),

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

17 <sup>493</sup> Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S.  
18 Senator 2 (Aug. 17, 2021),

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

20 <sup>494</sup> Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S.  
21 Senator 3 (Aug. 17, 2021),

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

23 <sup>495</sup> Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S.  
24 Senator 3 (Aug. 17, 2021),

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

26 <sup>496</sup> Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S.  
27 Senator 3 (Aug. 17, 2021),

28 <https://www.blumenthal.senate.gov/imo/media/doc/817.21facebookresponseletter.pdf>; *see also*

Meta Investor Relations, Earnings Call Transcript, Meta (April 25, 2018),

[https://s21.q4cdn.com/399680738/files/doc\\_financials/2018/Q1/Q1-18-Earnings-call-transcript.pdf](https://s21.q4cdn.com/399680738/files/doc_financials/2018/Q1/Q1-18-Earnings-call-transcript.pdf).

<sup>497</sup> Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S.  
Senator 6 (Aug. 17, 2021),

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

1 problematic usage;<sup>498</sup> its assessment that “[t]he best external research indicates that Facebook’s  
2 impact on people’s well-being is negative”;<sup>499</sup> its identification of “Problematic Use,” loneliness,  
3 and social comparison as the three drivers of this negative impact;<sup>500</sup> its finding that up to 25% of  
4 people on Facebook experience so-called problematic use;<sup>501</sup> its data showing that “high time spent  
5 users do tend to be disproportionately younger users”;<sup>502</sup> its conclusion that so-called problematic  
6 use causes profound harms, including loss of productivity, sleep disruption, relationship impacts,  
7 and safety risks;<sup>503</sup> its identification of multiple Meta product features that act as triggers for so-  
8 called problematic use;<sup>504</sup> its knowledge that teens who feel addicted to a Meta app “know that what  
9 they’re seeing is bad for their mental health but feel unable to stop themselves”;<sup>505</sup> its studies

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11 <sup>498</sup> Haugen\_00016373 at Haugen\_00016379 (Mar. 9, 2020 internal presentation and discussion  
12 about problematic use with a slide stating that problematic use “is sometimes referred to as ‘social  
13 media addiction’ externally”); Haugen\_00016373 at Haugen\_00016373 (Mar. 9, 2020 internal  
14 presentation and discussion regarding problematic use in which a Meta employee shared a post  
15 stating: “In Q4 2019, our Well-being Product Team conducted global qualitative research to better  
16 understand ‘problematic’ use (sometimes called ‘social media addiction’ externally”);  
17 Haugen\_00005458 at Haugen\_00005473 (Nov. 5, 2019 report by Meta employee regarding “Hard  
18 Life Moments – Mental health deep dive”); Haugen\_00007055 at Haugen\_00007055 (May 6,  
19 2019 memo by Meta employee regarding “Problematic use / time-spent papers at CHI”).

17 <sup>499</sup> Haugen\_00016373 at Haugen\_00016381 (Mar. 9, 2020 internal presentation and discussion  
18 about problematic use).

19 <sup>500</sup> Haugen\_00016373 at Haugen\_00016381.

20 <sup>501</sup> Haugen\_00016373 at Haugen\_00016383.

21 <sup>502</sup> Haugen\_00017177 at Haugen\_00017181 (Oct. 30, 2018 report by Meta employee regarding  
22 “How Behavior on Instagram Varies with Overall Time Spent”); Haugen\_00005458 at  
23 Haugen\_00005750-Haugen\_00005751 (Sept. 18, 2019 presentation containing slides about brain  
24 maturation).

24 <sup>503</sup> Haugen\_00016373 at Haugen\_00016414 (Mar. 9, 2020 presentation stating “All problematic  
25 users were experiencing multiple life impacts”).

26 <sup>504</sup> Haugen\_00016373 at Haugen\_00016410 (“We heard about 10+ triggers contributing to PU  
27 habits”).

27 <sup>505</sup> Haugen\_00017069 at Haugen\_00017171 (Oct. 10, 2019 report by Meta employee and  
28 discussion about teens’ mental health).

1 regarding body image and social comparison;<sup>506</sup> its knowledge that Instagram makes body image  
2 issues worse “for one in three teen girls”;<sup>507</sup> its analysis showing that topics eliciting appearance  
3 comparison comprise one third of what teen girls see on Instagram;<sup>508</sup> its research concluding that  
4 negative social comparison on Instagram gets worse for users over time;<sup>509</sup> its awareness that teens  
5 report Instagram as a source of increased anxiety and depression;<sup>510</sup> its finding that Instagram has a  
6 “consistent bias in favor of harmful content”;<sup>511</sup> its knowledge that Meta’s recommendation  
7 algorithms “create an echo chamber” of suicide and self-harm content;<sup>512</sup> its researchers’ conclusion  
8 that teens “[h]ave an addict’s narrative about their use” of Instagram;<sup>513</sup> and its survey finding that  
9 “[o]ver one third of teens felt they have only a little control of nor control at all over how Instagram  
10 makes them feel”<sup>514</sup>—in addition to the other findings described in this Complaint.

11

12 <sup>506</sup> Haugen\_00005458 at Haugen\_00005484 (Sept. 18, 2019 presentation regarding “Mental  
13 Health Findings”); Haugen\_00000797 at Haugen\_00000797 (Nov. 16, 2018 report regarding “IG  
14 Social Comparison Research Findings”).

14 <sup>507</sup> Haugen\_00005458 at Haugen\_00005500 (Sept. 18, 2019 presentation containing a slide stating  
15 “But, We Make Body Image Issues Worse for 1 in 3 Teen Girls”).

16 <sup>508</sup> Haugen\_00002527 at Haugen\_00002527 (Mar. 9, 2021 report regarding “How the topics  
17 people see are linked to appearance comparison on IG”).

18 <sup>509</sup> Haugen\_00000797 at Haugen\_00000875 (Nov. 16, 2018 report containing a page displaying  
19 data about negative social comparison over time).

19 <sup>510</sup> Haugen\_00017069 at Haugen\_00017121 (Oct. 10, 2019 presentation containing a slide  
20 regarding “Teens blame Instagram for increases in the rates of anxiety and depression among  
21 teens”).

22 <sup>511</sup> Haugen\_00003739 at Haugen\_00003739 (Undated report regarding “Is Instagram Reels  
23 Favoring badness?”).

23 <sup>512</sup> Haugen\_00005378 at Haugen\_00005379 (Dec. 2, 2020 report regarding “Tackle Community-  
24 Based Harm in Dangerous Content”).

25 <sup>513</sup> *Subcomm.: Protecting Kids Online: Facebook, Instagram, and Mental Health Harms Hearing*  
26 *before Subcomm. On Consumer Protection Product Safety, and Data Security* (Sept. 30, 2021),  
27 available at [https://www.commerce.senate.gov/2021/9/protecting-kids-online-facebook-  
instagram-and-mental-health-harms](https://www.commerce.senate.gov/2021/9/protecting-kids-online-facebook-instagram-and-mental-health-harms) ).

28 <sup>514</sup> *Subcomm.: Protecting Kids Online: Facebook, Instagram, and Mental Health Harms Hearing*



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

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

7                       Last month, on August 4, Senator Blackburn and I wrote to Mark  
8 Zuckerberg and asked him specifically about this issue. We asked,  
9 and I’m quoting, “Has Facebook’s research ever found that its  
10 platforms and products can have a negative effect on children’s and  
teens’ mental health or well-being such as increased suicidal thoughts,  
heightened anxiety, unhealthy usage patterns, negative self-image, or  
other indications of lower well-being?”

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

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

15                      We are not aware. Well, we all know now that representation was  
16 simply untrue.<sup>515</sup>

17           353. Senator Blumenthal went on to ask the witness, Facebook’s Vice President of  
18 Privacy & Public Policy, “why did Facebook misrepresent its research on mental health and teens  
19 when it responded to me and Senator Blackburn?” After disputing the characterization, Satterfield  
20 responded, “The safety and well-being of the teens on our platform is a top priority for the company.  
21 We’re going to continue to make it a priority. This was important research.” Senator Blumenthal  
22 then went on: “Why did you conceal it?” Satterfield responded, “we didn’t make it public because

23 *before Subcomm. On Consumer Protection Product Safety, and Data Security* (Sept. 30, 2021),  
24 available at [https://www.commerce.senate.gov/2021/9/protecting-kids-online-facebook-  
instagram-and-mental-health-harms](https://www.commerce.senate.gov/2021/9/protecting-kids-online-facebook-instagram-and-mental-health-harms).

25 <sup>515</sup> Richard Blumenthal, *Blumenthal Demands Facebook Appear at Next Week’s Consumer*  
26 *Protection Subcomm. Hearing to Explain Coverup of its Platforms’ Negative Impact on Teens and*  
27 *Children* (Sept. 21, 2021), available at  
28 [https://www.blumenthal.senate.gov/newsroom/press/release/blumenthal-demands-facebook-  
appear-at-next-weeks-consumer-protection-subcommittee-hearing-to-explain-coverup-of-its-  
platforms-negative-impact-on-teens-and-children](https://www.blumenthal.senate.gov/newsroom/press/release/blumenthal-demands-facebook-appear-at-next-weeks-consumer-protection-subcommittee-hearing-to-explain-coverup-of-its-platforms-negative-impact-on-teens-and-children).

1 we don't, with a lot of the research we do because we think that is an important way of encouraging  
2 free and frank discussion within the company about hard issues.”<sup>516</sup>

3 354. Meta unilaterally decided to prioritize “free and frank” internal discussion over  
4 honest and transparent responses to direct questions from sitting United States Senators. When it  
5 “dodged, ducked, sidetracked, [and] in effect misled” Senators Blumenthal and Blackburn, Meta  
6 deceived the public via its elected representatives.<sup>517</sup>

7 355. Moreover, Satterfield’s “free and frank discussion” excuse has been contradicted  
8 both internally and publicly by Meta employees. On January 8, 2020, a Meta software engineer  
9 participated in an internal “ask me anything” session, on the last day of his four-year tenure at the  
10 company. When asked how the Meta Defendants should respond to outside pressures and critiques,  
11 that software engineer stated: “Right now, many employees feel that if they whistleblow, dissent,  
12 give feedback to unethical decisions, etc, then they are at risk for being fired. We can fix that by  
13 giving people the safety to speak up when they see something wrong going on.”<sup>518</sup>

14 356. Frances Haugen echoed this sentiment in her testimony before the Senate, citing  
15 evidence that Meta “is so scared of even basic transparency that it goes out of its way to block  
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17 <sup>516</sup> Richard Blumenthal, *Blumenthal Demands Facebook Appear at Next Week’s Consumer*  
18 *Protection Subcomm. Hearing to Explain Coverup of its Platforms’ Negative Impact on Teens and*  
19 *Children* (Sept. 21, 2021), available at  
20 <https://www.blumenthal.senate.gov/newsroom/press/release/blumenthal-demands-facebook-appear-at-next-weeks-consumer-protection-subcommittee-hearing-to-explain-coverup-of-its-platforms-negative-impact-on-teens-and-children>.

21 <sup>517</sup> *Protecting Kids Online: Testimony from a Facebook Whistleblower Hearing before Subcomm.*  
22 *On Consumer Protection, Product Safety, and Data Security* (Oct. 5, 2021) available at  
23 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>; see also *Protecting Kids Online: Testimony from a*  
24 *Facebook Whistleblower Hearing before Subcomm. On Consumer Protection, Product Safety, and*  
25 *Data Security* (Oct. 5, 2021) available at  
26 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower> (statement by Senator Brian Schatz to Frances Haugen that he had “a long list of misstatements, misdirections and outright lies from the company”).

27 <sup>518</sup> Haugen\_00007481 at Haugen\_00007492 (Jan. 8, 2020 report regarding “Political Ads  
28 Announcement Preview [Confidential]”).

1 researchers who are asking awkward questions.”<sup>519</sup> Ms. Haugen further testified that Meta’s culture  
2 emphasizes insularity and promotes the idea that “if information is shared with the public, it will  
3 just be misunderstood.”<sup>520</sup>

4 357. The above representations of former employees are consistent with reports from  
5 Facebook content moderators that there is a “culture of fear and excessive secrecy” within Meta that  
6 “prevent[s] [them] from speaking out.”<sup>521</sup>

7 358. Notably, Meta’s pattern of concealment did not end after Frances Haugen came  
8 forward. On September 30, 2021, Antigone Davis, Facebook’s Head of Safety, testified before the  
9 Senate. Ms. Davis represented that, when Instagram “do[es] ads to young people, there are only  
10 three things that an advertiser can target around: age, gender, location. We also prohibit certain ads  
11 to young people, including weight-loss ads.”<sup>522</sup> She further testified, “We don’t allow the  
12 sexualization of minors on our platform.”<sup>523</sup>

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15 <sup>519</sup> *Protecting Kids Online: Testimony from a Facebook Whistleblower Hearing before Subcomm.*  
16 *On Consumer Protection, Product Safety, and Data Security* (Oct. 5, 2021) available at  
17 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

18 <sup>520</sup> *Protecting Kids Online: Testimony from a Facebook Whistleblower Hearing before Subcomm.*  
19 *On Consumer Protection, Product Safety, and Data Security* (Oct. 5, 2021) available at  
20 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

21 <sup>521</sup> Zoe Schiffer, *Facebook Content Moderators Call for Company to Put an End to Overly*  
22 *Restrictive NDAs*, *The Verge* (Jul. 22, 2021), available at  
23 <https://www.theverge.com/2021/7/22/22587757/facebook-content-moderators-ireland-end-restrictive-ndas>.

24 <sup>522</sup> *Subcomm.: Protecting Kids Online: Facebook, Instagram, and Mental Health Harms Hearing*  
25 *before Subcomm. On Consumer Protection Product Safety, and Data Security* (Sept. 30, 2021),  
26 available at <https://www.commerce.senate.gov/2021/9/protecting-kids-online-facebook-instagram-and-mental-health-harms>.

27 <sup>523</sup> *Protecting Kids Online: Testimony from a Facebook Whistleblower Hearing before Subcomm.*  
28 *On Consumer Protection, Product Safety, and Data Security* (Oct. 5, 2021) available at  
<https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

1 Ms. Davis’s statements were subsequently proven false by Senator Mike Lee. During an October  
2 2021 hearing, Senator Lee explained that a group called the Technology Transparency Project  
3 (“TTP”) alerted the U.S. Senate that it had gained Facebook’s approval to target a series of  
4 harmful ads to up to 9.1 million users between the ages of 13 and 17.<sup>524</sup> While TTP did not  
5 actually run the ads, approval from Meta to do so demonstrates that the company allows harmful  
6 targeted advertising toward minors. Senator Lee showed three examples of these Meta-approved  
7 ads, shown below:<sup>525, 526</sup>



19 <sup>524</sup> See *Protecting Kids Online: Testimony from a Facebook Whistleblower Hearing before*  
20 *Subcomm. On Consumer Protection, Product Safety, and Data Security* (Oct. 5, 2021) available at  
21 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

22 <sup>525</sup> These screen captures were taken from a video of the October 5, 2021 Senate Hearing with  
23 witness Frances Haugen. See *Protecting Kids Online: Testimony from a Facebook Whistleblower*  
24 *Hearing before Subcomm. On Consumer Protection, Product Safety, and Data Security* (Oct. 5,  
25 2021) available at  
<https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

26 <sup>526</sup> *Protecting Kids Online: Testimony from a Facebook Whistleblower Hearing before Subcomm.*  
27 *On Consumer Protection, Product Safety, and Data Security* (Oct. 5, 2021) available at  
28 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

1           359. The first ad encourages children to “[t]hrow a skittles party like no other” and  
2 displays the suggestion against a background of colorful prescription pills. The second ad promotes  
3 an “Ana Tip” instructing the viewer to “visit pro-ana sites to feed your motivation and reach your  
4 goal” when feeling hungry. The third ad informs the viewer that they “look lonely” and encourages  
5 them to “[f]ind your partner now to make a love connection.”

6           360. Senator Lee stated that, based on the Meta Defendants’ approval of these pro-drug,  
7 pro-anorexia, pro-sexualization ads targeted to children ages 13 to 17, “[o]ne could argue that it  
8 proves that Facebook is allowing and perhaps facilitating the targeting of harmful, adult-themed ads  
9 to our nation’s children.”<sup>527</sup>

10           361. In addition to the litany of misrepresentations and omissions identified above, Meta  
11 has repeatedly failed to tell the truth about the age of users on Instagram. In statements to Congress  
12 and elsewhere, Zuckerberg has represented that Meta does not allow users under the age of 13 to  
13 use the product. For example, in testimony before the U.S. House of Representatives Committee on  
14 Energy and Commerce, Zuckerberg stated: “There is clearly a large number of people under the age  
15 of 13 who would want to use a service like Instagram. We currently do not allow them to do that.”<sup>528</sup>

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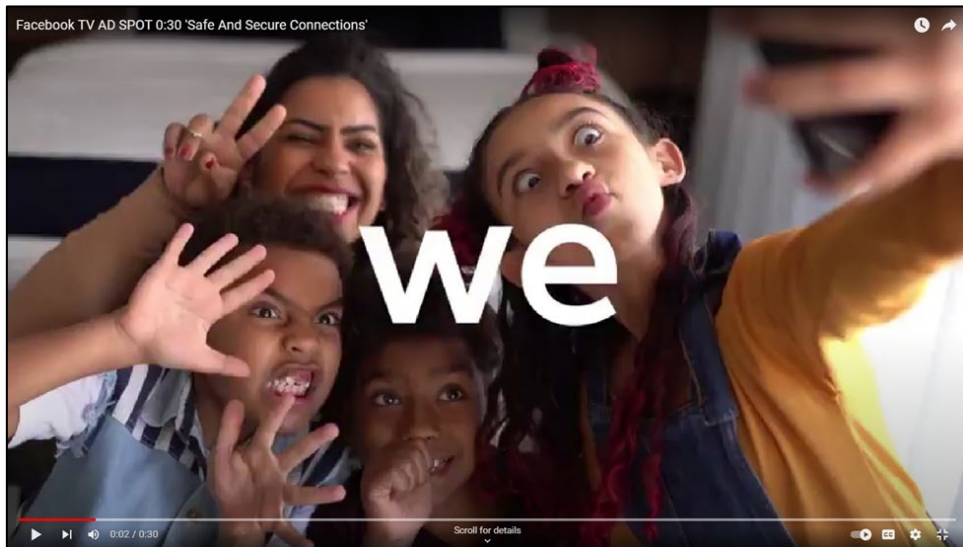
17 <sup>527</sup> *Protecting Kids Online: Testimony from a Facebook Whistleblower Hearing before Subcomm.*  
18 *On Consumer Protection, Product Safety, and Data Security* (Oct. 5, 2021) available at  
19 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

20 <sup>528</sup> *Disinformation Nation: Social Media’s Role in Promoting Extremism and Misinformation*  
21 *Hearing Before H. Energy and Commerce Subcomm. on Communications and Technology* 175  
22 (March 25, 2021), available at  
23 <https://www.congress.gov/117/meeting/house/111407/documents/HHRG-117-IF16-Transcript-20210325.pdf> (Zuckerberg: “[O]ur policies on-on the main apps that we offer generally prohibit  
24 people under the age of 13 from using the services.”); *See also Transcript of Zuckerberg’s*  
25 *appearance before House committee*, Washington Post (April 11, 2018),  
26 [https://www.washingtonpost.com/news/the-switch/wp/2018/04/11/transcript-of-zuckerbergs-  
27 appearance-before-house-committee/?utm\\_term=.e7b476fb8ac7&noredirect=on](https://www.washingtonpost.com/news/the-switch/wp/2018/04/11/transcript-of-zuckerbergs-appearance-before-house-committee/?utm_term=.e7b476fb8ac7&noredirect=on) (When asked if it  
28 is correct that children can get a Facebook account starting at age 13, Zuckerberg confirmed that it  
was correct); see also NewSchools Venture Fund, *NewSchools Summit 2011: John Doerr and*  
*Mark Zuckerberg on innovation and education* (May 24, 2011),  
<https://www.youtube.com/watch?v=n03zAOadyMA> (Zuckerberg: “[A]nd so basically, we don’t  
allow people under the age of 13 on Facebook . . . today we don’t allow people under the age of 13  
to sign up”).



1           362.    However, as shown above, Meta has long known that its product is widely used by  
2 children under the age of 13. In fact, Meta knows through retrospective cohort analyses that “up to  
3 10 to 15% of even 10 year-olds in a given cohort may be on Facebook or Instagram.”<sup>529</sup> Meta is  
4 also aware that teenagers coach tweens, defined by them as 10- to 12-year-olds, on how to use its  
5 products.<sup>530</sup>

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



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21 Other advertising campaigns have similarly touted Meta’s AI as being a feature that contributes to  
22 its products’ safety—without disclosing the serious defects identified in this *Complaint*.

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25 <sup>529</sup> *Protecting Kids Online: Testimony from a Facebook Whistleblower Hearing before Subcomm. On Consumer Protection, Product Safety, and Data Security* (Oct. 5, 2021), available at  
26 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

27  
28 <sup>530</sup> Haugen\_00016728 at Haugen\_00016736-Haugen\_00016740.

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

6                           **5. Meta facilitates the spread of CSAM and child exploitation.**

7           365. Various design features of Meta’s products promote and dramatically exacerbate  
8 sexual exploitation, the spread of CSAM, sextortion, and other socially maladaptive behavior that  
9 harms children.

10           366. Meta has long known about these outcomes.<sup>531</sup> In 2010, the *Daily Mail* in the United  
11 Kingdom reported that a pedophile used Facebook to groom up to 1,000 children for sex. Detectives  
12 “praised the ‘brave young people’ who helped catch this predator but attacked Meta, saying “many  
13 sickening incidents could have been avoided if the social networking site had installed a ‘panic  
14 button’ which allows youngsters to alert authorities if they suspect they were being groomed.”<sup>532</sup>

15           367. In 2013, the *Christian Science Monitor* reported that Facebook is a “favorite  
16 recruiting ground[.]” for child sex traffickers.<sup>533</sup>

17           368. In 2017, *The Times* in the U.K. reported that Facebook “failed to take down dozens  
18 of images and videos that were ‘flagged’ to its moderators, including . . . several violent paedophilic  
19 cartoons” and “a video of an apparent sexual assault on a child.”<sup>534</sup>

21 <sup>531</sup> See, e.g., Michael H. Keller and Gabriel J.X. Dance, The Internet Is Overrun With Images of  
22 Child Sexual Abuse,” N.Y. Times (Sept. 29, 2019),  
<https://www.nytimes.com/interactive/2019/09/28/us/child-sex-abuse.html>.

23 <sup>532</sup> Michael Seamark, *Paedophile postman used Facebook and Bebo to groom up to 1,000 children*  
24 *for sex*, DailyMail.com (May 28, 2010), [https://www.dailymail.co.uk/news/article-  
1282157/Facebook-grooming-How-pervert-postman-used-site-groom-hundreds-children.html](https://www.dailymail.co.uk/news/article-1282157/Facebook-grooming-How-pervert-postman-used-site-groom-hundreds-children.html).

25 <sup>533</sup> Marjorie Kehe Staff, *Kimberly Ritter stands up to child sex trafficking in US hotels*, The  
26 Christian Science Monitor (Mar. 15, 2013), [https://www.csmonitor.com/World/Making-a-  
27 difference/2013/0315/Kimberly-Ritter-stands-up-to-child-sex-trafficking-in-US-hotels](https://www.csmonitor.com/World/Making-a-difference/2013/0315/Kimberly-Ritter-stands-up-to-child-sex-trafficking-in-US-hotels).

28 <sup>534</sup> Alexi Mostrous, *Facebook publishing child pornography*, The Times (Apr. 13, 2017),

1           369. In 2019, the *Sunday Times*, also in the U.K., reported that “Instagram is steering  
2 paedophiles towards accounts belonging to children as young as 11, who should not be on the  
3 platform in the first place.”<sup>535</sup>

4           370. Despite its awareness from over a decade of red flags, Meta promotes its products as  
5 safe and family-friendly, and claims that its product features are designed to remind adolescent users  
6 who they are sharing with and to limit interactions with strangers.<sup>536</sup> This is simply not the case.  
7 Meta not only tolerates child exploitation; it knowingly assists, supports, and/or facilitates child  
8 exploitation through its defective product features.

9           371. Meta also fails to enforce its own policies regarding adolescent users, and does not  
10 incorporate simple, cost-effective technologies into the design of its products that would help reduce  
11 the prevalence of CSAM. Adolescent users are harmed by Meta’s defectively designed products,  
12 which are unreasonably dangerous for them.

13           372. For example, Facebook’s “People You May Know” feature helps predators connect  
14 with underage users and puts them at risk of sexual exploitation, sextortion, and production and  
15 distribution of CSAM; 80% of “violating adult/minor connections” on Facebook were the result of  
16 this friends recommendation system.<sup>537</sup> Instagram’s “Suggested for You” and “Because You  
17 Watched” features are similarly dangerous because they connect strangers, including adult  
18 predators, with adolescent users. As *The Sunday Times* revealed, “[p]redators who follow users  
19 posting photos of young models, dancers or gymnasts are shown a stream of other images they will  
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21 \_\_\_\_\_  
22 [https://www.thetimes.co.uk/article/facebook-publishing-child-pornography-  
pdgt87nm6?region=global](https://www.thetimes.co.uk/article/facebook-publishing-child-pornography-pdgt87nm6?region=global).

23 <sup>535</sup> Shanti Das & Geoff White, *Instagram sends paedophiles to accounts of children as young as*  
24 *11*, *The Sunday Times* (Dec. 1, 2019), [https://www.thetimes.co.uk/article/instagram-sends-  
predators-to-accounts-of-children-as-young-as-11-j2gn5hq83](https://www.thetimes.co.uk/article/instagram-sends-predators-to-accounts-of-children-as-young-as-11-j2gn5hq83). Meta was aware of this report.  
25 META3047MDL-003-00153063.

26 <sup>536</sup> *Safety Resources for Parents*, Meta Privacy, Safety, and Security  
27 [https://www.facebook.com/help/1079477105456277?helpref=faq\\_content](https://www.facebook.com/help/1079477105456277?helpref=faq_content).

28 <sup>537</sup> META3047MDL-003-00013254 at META3047MDL-003-00013255.



1 like and targeted with personalised recommendations of accounts to follow. Among the suggested  
2 accounts are newly created profiles belonging to children who would otherwise be almost  
3 impossible to find unless you had their user name.”<sup>538</sup>

4 373. Similarly, the absence of effective age verification measures, as described above,  
5 allows predators to lie about their ages and masquerade as children, with obvious dangers to the  
6 actual children on Meta’s products. Prior to November 2022, the default setting for Facebook users’  
7 profiles allowed posts to be publicly viewable by any user. This allowed predators to discover and  
8 connect with adolescent users. The same is true for users’ friends lists.

9 374. Instagram is similarly flawed, having transitioned to private profiles for users under  
10 16 only in July 2021. Up until that change—and even after—millions of minors are left exposed to  
11 predation and at risk of extortion and abuse by default. Indeed, *The Sunday Times* reported that  
12 “[o]ne of those brought to the surface by Instagram’s algorithm contained selfies of a young girl and  
13 a profile description that read: “Hey people hope you decide to follow me im 11.”<sup>539</sup>

14 375. Distressingly, Meta considered making teenage users’ profiles “private by default”  
15 at least as early as July 2020, but chose not to do so after pitting “safety, privacy, and policy wins”  
16 against “growth impact.”<sup>540</sup>

17 376. Meta’s products also include direct messaging features. Instagram’s direct messaging  
18 system is equipped with a product feature called a “photo bomb,” which is an image or video sent  
19 from a smartphone that automatically disappears from the recipient’s inbox. Both Facebook’s and  
20 Instagram’s messaging system also have a “Vanish Mode” option, which makes the message  
21 disappear after it has been read.

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23 <sup>538</sup> Shanti Das & Geoff White, *Instagram sends paedophiles to accounts of children as young as*  
24 *11*, *The Sunday Times* (Dec. 1, 2019), <https://www.thetimes.co.uk/article/instagram-sends-predators-to-accounts-of-children-as-young-as-11-j2gn5hq83>.

25 <sup>539</sup> Shanti Das & Geoff White, *Instagram sends paedophiles to accounts of children as young as*  
26 *11*, *The Sunday Times* (Dec. 1, 2019), <https://www.thetimes.co.uk/article/instagram-sends-predators-to-accounts-of-children-as-young-as-11-j2gn5hq83>.

27 <sup>540</sup> META3047MDL-003-00028226 at META3047MDL-003-00028226; META3047MDL-003-  
28 00013254 at META3047MDL-003-00013254.

1           377. Meta’s messaging features allow users to exchange private messages with other  
2 product users. In addition, users do not have to be connected as friends or followers to initiate  
3 conversations, which enables predators to communicate privately with youth, with virtually no  
4 evidence of what was exchanged. This feature enables predators to identify children who are willing  
5 to respond to a stranger's message, and then prey on their insecurities. Even though “this is the kind  
6 of thing that pisses Apple off to the extent of threatening to remove us from the App Store,” as of  
7 mid-2020, Meta had no timeline for “when we’ll stop adults from messaging minors in IG  
8 Direct.”<sup>541</sup> That remained true even after Meta received reports that a 12-year-old minor solicited  
9 on its platform “was [the] daughter of [an] Apple Security Exec.”<sup>542</sup>

10           378. An internal study conducted in or around June of 2020 concluded that 500,000  
11 underage Instagram accounts “receive IIC”—which stands for “inappropriate interactions with  
12 children”—on a *daily* basis.<sup>543</sup> Yet, at the time, “Child Safety [was] explicitly called out as a non-  
13 goal . . . . So if we do something here, cool. But if we can do nothing at all, that’s fine, too.”<sup>544</sup>

14           379. Meta’s products also permit users to operate multiple accounts simultaneously.  
15 Operating multiple accounts enables adolescent users to have multiple unique online identities. In  
16 addition, parents are often unaware that more than one account exists and therefore do not monitor  
17 the additional accounts as they would the primary, known account. By permitting multiple accounts,  
18 Meta compounds children’s exposure to danger on its products and hampers parents’ attempts to  
19 monitor their children’s activities.

20           380. Meta’s products also utilize a location feature that allows users to geotag the location  
21 where a photo was taken or from where a post is being made. On Facebook, users can search posts  
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24 <sup>541</sup> META3047MDL-003-00028019 at META3047MDL-003-00028019.

25 <sup>542</sup> META3047MDL-003-00028019 at META3047MDL-003-00028020.

26 <sup>543</sup> META3047MDL-003-00028214 at META3047MDL-003-00028216- META3047MDL-003-  
27 00028218.

28 <sup>544</sup> META3047MDL-003-00028214 at META3047MDL-003-00028215.

1 by location and find pages and groups by the location tagged in a user’s post. Similarly, Instagram  
2 users can use the Explore tool to search for posts based on location tags.

3 381. Location tagging is inherently dangerous for children, as it identifies where they are  
4 located, where they vacation, where they attend school, and so on. Predators can find these posts by  
5 searching within specific geographic confines. This enables the identification of potential victims in  
6 a predator’s area, increasing the risk that adolescent users are targeted for sexual exploitation,  
7 sextortion, and CSAM.

8 382. Meta’s policies fail to adequately protect children, especially teens. Meta created its  
9 own definition of CSAM that fails to sufficiently meet the clear requirements provided in, *e.g.*, Cal.  
10 Pen. Code § 311.3 and related case law, as well as other similar and applicable state laws. Meta  
11 relies on its own definitions to fail to report harmful CSAM to the authorities as required by law.<sup>545</sup>  
12 For example, Meta utilizes the Tanner Stages, a classification system used to track children’s  
13 physical development during puberty, to assist with making moderation decisions related to  
14 potential CSAM. The scale’s creator, Dr. James Tanner, has called this approach “wholly  
15 illegitimate.”<sup>546</sup>

16 383. Despite using PhotoDNA and other technology in Facebook’s product design as  
17 early as 2011, Meta has hindered its effectiveness and success by creating its own CSAM definitions  
18 and compromising its own detection model.

19 384. In fact, the United States Department of Justice (“DOJ”) urged Zuckerberg to refrain  
20 from implementing dangerous design modifications to his products, “embed the safety of the public  
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24 <sup>545</sup> Michael H. Keller, *Adults or Sexually Abused Minors? Getting It Right Vexes Facebook*, N.Y.  
25 Times (Mar. 31, 2022), [https://www.nytimes.com/2022/03/31/business/meta-child-sexual-  
26 abuse.html](https://www.nytimes.com/2022/03/31/business/meta-child-sexual-abuse.html).

27 <sup>546</sup> Michael H. Keller, *Adults or Sexually Abused Minors? Getting It Right Vexes Facebook*, New  
28 York Times, (March 31, 2022), [https://www.nytimes.com/2022/03/31/business/meta-child-sexual-  
abuse.html](https://www.nytimes.com/2022/03/31/business/meta-child-sexual-abuse.html).

1 in system designs,” and “act against illegal content effectively with no reduction to safety,” in ways  
2 that safeguard victims.<sup>547</sup>

3 385. In November of 2021, Meta indicated that it would postpone certain product design  
4 changes, such as encrypting direct messages on Instagram, that would create an increased risk and  
5 volume of CSAM within its products. However, in January 2022, it implemented those changes to  
6 its Messenger application, increasing risks to vulnerable children, and the volume of predators and  
7 CSAM, without sufficient warning.<sup>548</sup> In 2019, FBI Director Christopher Wray stated that, with the  
8 design decision to encrypt Messenger absent additional protections for children, Facebook would  
9 become “a dream-come-true for predators and child pornographers. A platform that allows them to  
10 find and connect with kids, and like-minded criminals, with little fear of consequences. A lawless  
11 space created not by the American people, or their elected officials, but by the owners of one big  
12 company.”<sup>549</sup>

13 386. Even further compounding these problems, Meta has “instructed content moderators  
14 for its platforms to ‘err on the side of an adult’ when they are uncertain about the age of a person in  
15 a photo or video, according to a corporate training document.”<sup>550</sup>

16 387. Shortly after Frances Haugen disclosed how Meta’s products harm children, an  
17 unnamed whistleblower and former Facebook employee revealed in a five-page document that  
18 Meta’s efforts to address the prevalence of CSAM within its products were “inadequate” and

19 \_\_\_\_\_  
20 <sup>547</sup> Letter to Mark Zuckerberg from Department of Justice 2 (October 4, 2019),  
<https://www.justice.gov/opa/press-release/file/1207081/download>.

21 <sup>548</sup> Timothy Buck, *Express Yourself in Messenger’s End-to-End Encrypted Chats*, Messenger  
22 News (Jan. 27, 2022), [https://messengernews.fb.com/2022/01/27/express-yourself-in-messengers-  
23 end-to-end-encrypted-chats/](https://messengernews.fb.com/2022/01/27/express-yourself-in-messengers-end-to-end-encrypted-chats/).

24 <sup>549</sup> Raphael Satter & Sarah N. Lynch, *FBI Director Warns Facebook Could Become Platform Of  
25 ‘Child Pornographer’*, Reuters (Oct. 4, 2019), [https://www.reuters.com/article/us-facebook-  
26 security/fbi-director-warns-facebook-could-become-platform-of-child-pornographers-  
27 idUSKBN1WJ1NQ](https://www.reuters.com/article/us-facebook-security/fbi-director-warns-facebook-could-become-platform-of-child-pornographers-idUSKBN1WJ1NQ).

28 <sup>550</sup> Michael H. Keller, *Adults or Sexually Abused Minors? Getting It Right Vexes Facebook*, N.Y.  
Times (Mar. 31, 2022), [https://www.nytimes.com/2022/03/31/business/meta-child-sexual-  
abuse.html](https://www.nytimes.com/2022/03/31/business/meta-child-sexual-abuse.html).

1 “under-resourced.”<sup>551</sup> This whistleblower also stated that Meta “doesn’t track” the full scale of the  
2 CSAM problem within its products because senior executives consistently limit the funds available  
3 for child protection design efforts, by instead focusing on the company’s “return on investment.”<sup>552</sup>

4 388. Meta’s failure to monitor its products for CSAM and protect its most vulnerable users  
5 is all the more shocking considering the troves of data and information it collects about users to  
6 monitor their preferences and lifestyles for advertising clients, all to power its algorithmic  
7 recommendation systems. Using that same technology, Meta could easily detect, report, and take  
8 actions to prevent instances of sexual grooming, sextortion, and CSAM distribution on its products.

9 389. Instead of taking these crucial, life-saving actions, Meta misleadingly asserts that,  
10 when it “become[s] aware of apparent child exploitation, we report it to the National Center for  
11 Missing and Exploited Children (NCMEC), in compliance with applicable law.”<sup>553</sup> But Meta’s  
12 response to law enforcement inquiries is often significantly delayed, if they respond at all, and Meta  
13 further frustrates law enforcement investigations by failing to promptly report child sexual  
14 exploitation.<sup>554</sup>

15 390. As a result, Meta’s products are polluted with illegal material that promotes and  
16 facilitates the sexual exploitation of minors. Meta benefits from increased user activity (and  
17 increased advertising revenue) for disseminating these materials on its products.

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20 <sup>551</sup> Angus Crawford, *Whistleblower: Facebook’s response to child abuse ‘inadequate’*, BBC  
21 News, (Oct. 28, 2021) <https://www.bbc.com/news/technology-59063768>.

22 <sup>552</sup> Angus Crawford, *Whistleblower: Facebook’s response to child abuse ‘inadequate’*, BBC  
23 News, (Oct. 28, 2021) <https://www.bbc.com/news/technology-59063768>.

24 <sup>553</sup> Meta, *Meta’s Child Sexual Exploitation, Abuse and Nudity, Facebook Community Standards*,  
25 <https://transparency.fb.com/policies/community-standards/child-sexual-exploitation-abuse-nudity/>.

26 <sup>554</sup> See Michael H. Keller & Gabriel J. X Dance, *The Internet Is Overrun With Images Of Child  
27 Sexual Abuse. What Went Wrong?*, N.Y. Times (Sept. 29, 2019),  
28 <https://www.nytimes.com/interactive/2019/09/28/us/child-sex-abuse.html> (describing the  
proliferation of CSAM on social media apps and the way the apps have hampered law  
enforcement investigations).

1           391. Meta knows that its products are used for the production, possession, distribution,  
2 receipt, transportation, and dissemination of millions of materials that depict obscene visual  
3 representations of the sexual abuse of children each year. Meta also knows that its defective  
4 algorithms worsen the problem: “CEI (Child Expolitative [sic] Imagery) is . . . something people  
5 seek out, and our recommendations can make worse.”<sup>555</sup>

6           392. Meta knowingly fails to take adequate and readily available measures to remove  
7 these contraband materials from its products in a timely fashion.

8           393. Meta knows, or reasonably should have known, that its products are increasingly  
9 unsafe for children each year, and yet fails to implement safeguards to prevent children from  
10 accessing its products.

11           394. In addition to these dangerous features that enable CSAM and child exploitation,  
12 Meta’s products hamper identification and reporting of CSAM or child pornography. For example,  
13 they do not allow a person to report harmful content without first logging into and using the products,  
14 which requires them to sign up for an account and provide a name and email address.<sup>556</sup>

15           395. Neither Instagram nor Facebook contain product features that allow users to report  
16 harmful images or videos directly from their direct messaging features.<sup>557</sup>

17           396. Upon information and belief, Meta paused or completely stopped certain proactive  
18 scanning measures related to child exploitation imagery and CSAM for some unknown period(s),  
19 including a period within the past three years.<sup>558</sup>

20 \_\_\_\_\_  
21 <sup>555</sup> META3047MDL-003-00068860 at META3047MDL-003-00068861.

22 <sup>556</sup> Canadian Centre for Child Protection, *Reviewing Child Sexual Abuse Material Reporting*  
23 *Functions on Popular Platforms* 16,  
24 [https://protectchildren.ca/pdfs/C3P\\_ReviewingCSAMMaterialReporting\\_en.pdf](https://protectchildren.ca/pdfs/C3P_ReviewingCSAMMaterialReporting_en.pdf) (last accessed  
December 28, 2022).

25 <sup>557</sup> Canadian Centre for Child Protection, *Reviewing Child Sexual Abuse Material Reporting*  
26 *Functions on Popular Platforms* 13,  
27 [https://protectchildren.ca/pdfs/C3P\\_ReviewingCSAMMaterialReporting\\_en.pdf](https://protectchildren.ca/pdfs/C3P_ReviewingCSAMMaterialReporting_en.pdf) (last accessed  
December 28, 2022).

28 <sup>558</sup> META3047MDL-003-00009133 at META3047MDL-003-00009134.

1 397. Meta knowingly possessed the capabilities and technologies to incorporate other  
2 automatic actions into its product designs to protect children (including, but not limited to,  
3 immediately disabling or deleting harmful content to minors), but Meta deliberately and willfully  
4 failed to do so. Instead, Meta brazenly allowed the sexualization and exploitation of minors on their  
5 products to continue.

6 398. Meta knowingly failed to invest in adequate CSAM prevention measures, including,  
7 but not limited to, client-side scanning and perceptual hashing.

8 399. Despite having the technology to limit the spread, Meta continues to fail to prevent  
9 the spread of this same CSAM on their products.<sup>559</sup>

10 400. Meta knowingly failed to design its products to proactively detect harmful  
11 interactions between adults and minors, despite having the technology and capabilities to do so  
12 successfully.<sup>560</sup>

13 401. Finally, Meta's products offer unreasonably inadequate parental controls; for  
14 example, parents cannot monitor their child's account without logging into the child's account  
15 directly.

16 402. Collectively, these defects make it difficult for parents to monitor their children's use  
17 of Meta's products, and they enable predators to identify, connect to, and exploit children.<sup>561</sup>

18 **6. Meta failed to adequately warn Plaintiffs or Consortium Plaintiffs**  
19 **about the dangers and harms caused by Instagram and Facebook, or**  
20 **provide instructions regarding safe use.**

21 403. Meta has failed to adequately warn adolescent users and parents about the physical  
22 and mental health risks posed by Instagram and Facebook. These risks include a plethora of mental

23 <sup>559</sup> See META3047MDL-003-00012994 at META3047MDL-003-00012995- META3047MDL-  
003-00012996 (describing Meta's adoption of different CSAM prevention technologies).

24 <sup>560</sup> Hany Farid, *Reining in Online Abuses*, 19 Technology and Innovation 593-599 (2018);  
25 META3047MDL-003-00009133 at META3047MDL-003-00009134 (describing Meta's pause of  
26 certain CSAM prevention work during Covid-19 and CSAM prevention procedures more  
broadly).

27 <sup>561</sup> Hany Farid, *Reining in Online Abuses*, 19 Technology and Innovation 593-599 (2018),  
28 <https://farid.berkeley.edu/downloads/publications/nai18.pdf>.

1 health disorders, like compulsive use, addiction, eating disorders, anxiety, depression, insomnia,  
2 exacerbated executive dysfunction, sexual exploitation from adult users, suicidal ideation, self-  
3 harm, and death.

4 404. Meta targets adolescent users via advertising and marketing materials distributed  
5 throughout digital and traditional media that fail to provide sufficient warnings to potential  
6 adolescent consumers of the physical and mental risks associated with using Facebook and  
7 Instagram.

8 405. Meta also fails to adequately warn adolescent users during the product registration  
9 process. At account setup, neither Instagram nor Facebook contain warning labels, banners, or  
10 conspicuous messaging to adequately inform adolescent users of the known product risks and  
11 potential physical and mental harms associated with usage. Instead, Meta allows adolescent users,  
12 including those under the age of 13, to easily create an account (or multiple accounts) and fully  
13 access these products.

14 406. Meta's failure to warn adolescent users continues even as adolescents exhibit  
15 problematic signs of addiction to and compulsive use of Facebook or Instagram. For example, Meta  
16 does not warn users when their screen time reaches harmful levels or when adolescents are accessing  
17 the product habitually.

18 407. Despite proactively providing adolescent users with countless filtering and editing  
19 tools, Meta also does not appropriately warn adolescent users regarding which images have been  
20 altered or the mental health harms associated with the heavily filtered images that Meta presents and  
21 recommends.

22 408. Not only does Meta fail to adequately warn users regarding the risks associated with  
23 Instagram and Facebook, it also does not provide sufficient instructions on how adolescents can  
24 safely use the products.

25 409. Meta's failure to adequately warn and instruct, as set forth herein, has proximately  
26 caused significant harm to the mental and physical well-being of Plaintiffs and Consortium  
27 Plaintiffs, in addition to the other injuries and harms as set forth herein.

28



1           **C.       FACTUAL ALLEGATIONS AS TO SNAP**

2           410.   Snap Inc. calls itself “a camera company.”<sup>562</sup> Its “flagship product, Snapchat, is a  
3 camera application that was created to help people communicate through short videos and images.  
4 [Snap] calls each of those short videos or images a Snap.”<sup>563</sup> Snap’s design of its Snapchat product  
5 capitalizes on children’s increasing attachment to quick, instantaneous exchanges. As Snap’s  
6 founder and CEO Evan Spiegel has explained, “today... pictures are being used for talking. So when  
7 you see your children taking a zillion photos of things that you would never take a picture of, it’s  
8 cos [sic] they’re using photographs to talk. And that’s why people are taking and sending so many  
9 pictures on Snapchat every day.”<sup>564</sup>

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

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19 \_\_\_\_\_  
20 <sup>562</sup> Snap Inc. Form S-1 Registration Statement (*hereafter* “Form S-1”) at 1 (Feb. 2, 2017),  
21 [;https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm](https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm); *See*  
22 *also, Snap – Who We Are*, Snap Inc.; (“We believe that reinventing the camera represents our  
23 greatest opportunity to improve the way people live and communicate.”); *Join Team Snap*, Snap  
Inc., <https://careers.snap.com/?lang=en-US> (last visited April 5, 2023 at 9:00 AM ). (“We  
believe that reinventing the camera represents our greatest opportunity to improve the way people  
live and communicate.”).

24 <sup>563</sup> Snap Inc. Form S-1 Registration Statement (*hereafter* “Form S-1”) at 1 (Feb. 2, 2017),  
25 <https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm>.

26 <sup>564</sup> Stuart Dredge, *What is Snapchat? CEO Evan Spiegel explains it all for parents*, The Guardian,  
27 June 15, 2015, <https://www.theguardian.com/technology/2015/jun/17/what-is-snapchat-evan-spiegel-parents>.

1           412. Snapchat’s design features cause its young users to suffer increased anxiety,  
2 depression, disordered eating, sleep deprivation, suicide, and other severe mental and physical  
3 injuries. Snap knows or should have known this. Snap intentionally designed Snapchat to prey on  
4 the neuropsychology and behavioral patterns of children to maximize their engagement and increase  
5 Snap’s advertising revenue. Despite this knowledge, Snap continues to update its product and add  
6 features intentionally designed to entice, exploit, and addict kids, including Snap Streaks, trophies,  
7 social signifiers and reward systems, quickly disappearing messages, filters, lenses, and games.

8           413. Snap knew, or should have known, that its conduct has negatively affected youth.  
9 Snap’s conduct has been the subject of inquiries by the United States Senate regarding Snapchat’s  
10 use “to promote bullying, worsen eating disorders, and help teenagers buy dangerous drugs or  
11 engage in reckless behavior.”<sup>565</sup> Further, Senators from across the ideological spectrum have  
12 introduced bills that would ban many of Snapchat’s features that are particularly addictive to  
13 adolescents.<sup>566</sup>

14           414. Despite these calls for oversight from Congress, Snap has failed to curtail its use of  
15 features such as streaks, badges, and other awards that reward users’ level of engagement with  
16 Snapchat. As described in detail below, Snapchat is a product that causes harm to children, the target  
17 audience for whom Snap designed and to whom it promoted its product.

18                           **1. Background and overview of Snapchat.**

19           415. Snapchat was created by three college students in 2011 and first released for iPhones  
20 in September 2011. Snapchat quickly evolved from its origin as a disappearing-message chat

22 <sup>565</sup> Bobby Allyn, *4 Takeaways from the Senate child safety hearing with YouTube, Snapchat and*  
23 *TikTok*, National Public 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)  
24 [hearing](https://www.npr.org/2021/10/26/1049267501/snapchat-tiktok-youtube-congress-child-safety-hearing).

25 <sup>566</sup> See Abigail Clukey, *Lawmaker Aims To Curb Social Media Addiction With New Bill*, National  
26 Public Radio (Aug. 3, 2019), [https://www.npr.org/2019/08/03/747086462/lawmaker-aims-to-curb-](https://www.npr.org/2019/08/03/747086462/lawmaker-aims-to-curb-social-media-addiction-with-new-bill)  
27 [social-media-addiction-with-new-bill](https://www.npr.org/2019/08/03/747086462/lawmaker-aims-to-curb-social-media-addiction-with-new-bill); Social Media Addiction Reduction Technology Act, S.  
28 2314, 116th Cong. (2019); Kids Internet Design and Safety Act, S. 2918, 117th Cong. (2021).

1 application after Snap’s leadership made design changes and rapidly developed new product  
2 features. As a result of its design and implementation of dangerous and addictive features  
3 specifically targeting youths (described below), Snapchat quickly became widely used among  
4 children.

5 416. Snap marketed Snapchat as “temporary social media” that would allow users to show  
6 a more authentic, unpolished, and spontaneous side of themselves.<sup>567</sup> Snapchat’s central and  
7 defining feature, the “Snap,” allows users to send and receive ephemeral, or “disappearing,”  
8 audiovisual messages. That feature foreseeably and quickly drove users to exchange sexually  
9 explicit “Snaps,” sometimes called “sexts” even though they are photos. Because of its brand  
10 identity among millennials as the original ephemeral-messaging app, Snapchat almost immediately  
11 became known as the “sexting” app—a fact that Snap was or should have been on notice of from  
12 public sources.<sup>568</sup>

13 417. Snapchat creates images and GIFs for users to incorporate into their videos and  
14 picture postings. Snap has also acquired publishing rights to thousands of hours of music and video  
15 which it provides to Snapchat users to attach to the videos and pictures that they send.

16 **2. Snap targets children.**

17 **a. Snap has designed its Snapchat product to grow use by children**  
18 **to drive the company’s revenue.**

19 418. Within five months of launching, Snapchat had 40,000 users.<sup>569</sup> By May 2012, less  
20 than eight months after launching, CEO Evan Spiegel reported that the company was “thrilled” to

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22 <sup>567</sup> Jenna Wortham, *A Growing App Lets You See It, Then You Don’t*, New York Times (Feb. 9,  
23 [https://www.nytimes.com/2013/02/09/technology/snapchat-a-growing-app-lets-you-see-it-then-you-dont.html?\\_r=0](https://www.nytimes.com/2013/02/09/technology/snapchat-a-growing-app-lets-you-see-it-then-you-dont.html?_r=0)).

24 <sup>568</sup> Megan Dickey, *Let’s Be Real: Snapchat Is Totally Used For Sexting*, Bus. Insider (Nov. 30,  
25 <https://www.businessinsider.com/snapchat-growth-sexting-2012-11>; Billy Gallagher, *No, Snapchat Isn’t About Sexting, Says Co-Founder Evan Spiegel*, TechCrunch (May 12, 2012),  
26 <https://techcrunch.com/2012/05/12/snapchat-not-sexting/b> (describing an interview in which a  
27 journalist asked the CEO of Snap about the product’s potential use for sexting).

28 <sup>569</sup> Ken Auletta, *Get Rich U*, New Yorker (Apr. 30, 2012),  
<https://www.newyorker.com/magazine/2012/04/30/get-rich-u>.

1 learn that most of Snapchat’s users were high school students sending “behind-the-back photos of  
2 teachers and funny faces” to each other during class. According to Spiegel, Snap’s server data  
3 showed peaks of activity during the school day.<sup>570</sup>

4 419. Snap immediately focused on increasing the product’s frequency of use.<sup>571</sup> By late  
5 2012, Snapchat had over a million active users sending over 20 million Snaps per day.<sup>572</sup> By 2013,  
6 Snapchat users were sending over 60 million Snaps per day.<sup>573</sup> By the end of 2022, this number has  
7 risen to over 5 billion Snaps per day.<sup>574</sup>

8 420. As Snap continued to quickly add new features to its product, the number of  
9 Snapchat’s daily active users (users who open Snapchat at least once during a 24-hour period)  
10 rapidly increased.<sup>575</sup> In 2017, Snap reported that its users opened the product more than 18 times a  
11 day on average. By 2019, users were opening the product an average of 30 times per day.

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17 <sup>570</sup> Team Snapchat, *Let’s Chat*, Snapchat Blog at <http://blog.snapchat.com> (May 9, 2012),  
18 available at <https://web.archive.org/web/20120518003029/http://blog.snapchat.com:80/>.

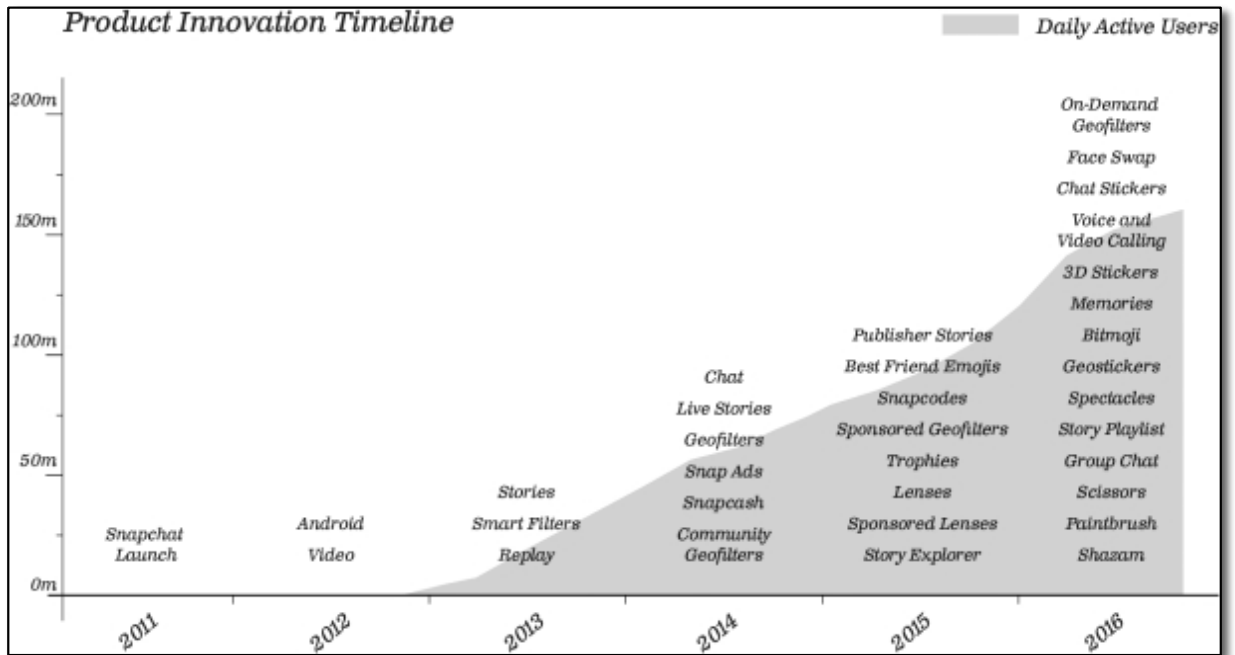
19 <sup>571</sup> Billy Gallagher, *You Know What’s Cool? A Billion Snapchats: App Sees Over 20 Million*  
20 *Photos Shared Per Day, Releases On Android*, TechCrunch (Oct. 29, 2012),  
<https://techcrunch.com/2012/10/29/billion-snapchats/>.

21 <sup>572</sup> Billy Gallagher, *You Know What’s Cool? A Billion Snapchats: App Sees Over 20 Million*  
22 *Photos Shared Per Day, Releases On Android*, TechCrunch (Oct. 29,  
2012), <https://techcrunch.com/2012/10/29/billion-snapchats/>.

23 <sup>573</sup> Billy Gallagher, *Snapchat Raises \$13.5M Series A Led By Benchmark, Now Sees 60M Snaps*  
24 *Sent Per Day*, TechCrunch (Feb. 9, 2013), [https://techcrunch.com/2013/02/08/snapchat-raises-13-  
25 5m-series-a-led-by-benchmark-now-sees-60m-snaps-sent-per-day/](https://techcrunch.com/2013/02/08/snapchat-raises-13-5m-series-a-led-by-benchmark-now-sees-60m-snaps-sent-per-day/).

26 <sup>574</sup> Snap Inc. Q4 2022 Investors Meeting Transcript at p. 7 (Jan. 31, 2023),  
<https://s25.q4cdn.com/442043304/files/transcript/snap-inc.-q4-2022-transcript.pdf>.

27 <sup>575</sup> Snap Inc. Form S-1 Registration Statement (*hereafter* “Form S-1”) at 91 (Feb. 2, 2017),  
28 <https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm>.



Snapchat Innovation Timeline 2011-2016 <sup>576</sup>

421. Today, Snapchat is one of the world’s most widely used apps. By its own estimates, Snapchat has 363 million daily users, including 100 million daily users in North America.<sup>577</sup> Snapchat also “reaches 90% of the 13-24 year old population” in over twenty countries, and reaches nearly half of all smartphone users in the United States.<sup>578</sup>

422. Snapchat’s explosive growth is driven by its key user demographic, 13-17 year olds. In 2022, 59% of US teens used Snapchat and 15% said they used it “almost constantly.”<sup>579</sup> Snapchat proudly touts its influence over what it calls the “Snapchat Generation” (“Gen Z”).<sup>580</sup>

<sup>576</sup> Snap Inc. Form S-1 Registration Statement (*hereafter* “Form S-1”) at 91 (Feb. 2, 2017), <https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm>.

<sup>577</sup> October 2022 Investor Presentation at 5, Snap Inc. (Oct. 20, 2022), <https://investor.snap.com/events-and-presentations/presentations/default.aspx>.

<sup>578</sup> October 2022 Investor Presentation at 6-7, Snap Inc. (Oct. 20, 2022), <https://investor.snap.com/events-and-presentations/presentations/default.aspx>.

<sup>579</sup> Pew Research Center, Teens, Social Media and Technology 2022 (Aug. 10, 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

<sup>580</sup> SNAP0000137 at 0139.

1            423. In 2014, Snap began running advertisements on Snapchat.<sup>581</sup> Snapchat’s entire  
2 business model revolves around its advertising revenue. According to internal company records,  
3 advertisements were pervasive on Snapchat by 2015 and, by 2018, 99% of Snap’s total revenue  
4 came from advertising. Advertising has accounted for 99% of Snap’s revenue each year since  
5 2018.<sup>582</sup> In 2022, Snap’s revenue was approximately \$4.6 billion.<sup>583</sup>

6            424. Snap attracts advertisers by providing them access to the huge universe of Snapchat  
7 users and by collecting immense amounts of data on its users, including its pre-teen and teenage  
8 users, which it uses to target advertising to those users. Snap makes no secret of this practice,  
9 recently acknowledging that it relies “heavily on our ability to collect and disclose data, and metrics  
10 to our advertisers so we can attract new advertisers and retain existing advertisers. Any restriction  
11 or inability, whether by law, regulation, policy, or other reason, to collect and disclose data and  
12 metrics which our advertisers find useful would impede our ability to attract and retain  
13 advertisers.”<sup>584</sup>

14            425. Snap’s growth in advertising revenues was driven by changes Snap made to Snapchat  
15 that incentivized compulsive and addictive use at the expense of its users’ health. Snap’s internal  
16 research indicates the Snapchat experience is “more immersive” than its competitors’ apps. This  
17 means users are more likely than on other apps to keep watching videos (and advertising).<sup>585</sup> Other  
18 research shows that Snapchat’s daily active users are constantly using its product; compared to other  
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21 <sup>581</sup> Angela Moscaritolo, *Snapchat Adds ‘Geofilters’ in LA*, *New York*, PC Mag. (July 15, 2014),  
22 <https://www.pcmag.com/news/snapchat-adds-geofilters-in-la-new-york>.

23 <sup>582</sup> Snap Inc. Form 10-K at 18 (Dec. 31, 2022), [https://d18rn0p25nwr6d.cloudfront.net/CIK-  
0001564408/c22ae9bd-7418-456e-82d4-48129de1df54.pdf](https://d18rn0p25nwr6d.cloudfront.net/CIK-0001564408/c22ae9bd-7418-456e-82d4-48129de1df54.pdf).

24 <sup>583</sup> Snap Inc. Form 10-K at 18 (Dec. 31, 2022), [https://d18rn0p25nwr6d.cloudfront.net/CIK-  
0001564408/c22ae9bd-7418-456e-82d4-48129de1df54.pdf](https://d18rn0p25nwr6d.cloudfront.net/CIK-0001564408/c22ae9bd-7418-456e-82d4-48129de1df54.pdf).

25 <sup>584</sup> Snap Inc. Form 10-K at 18 (Dec. 31, 2022), [https://d18rn0p25nwr6d.cloudfront.net/CIK-  
0001564408/c22ae9bd-7418-456e-82d4-48129de1df54.pdf](https://d18rn0p25nwr6d.cloudfront.net/CIK-0001564408/c22ae9bd-7418-456e-82d4-48129de1df54.pdf).

26 <sup>585</sup> SNAP0000103 at 0120.  
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1 apps, users are most likely to use Snapchat “right when I wake up,” “before work/school,” “during  
2 work/school,” “after work/school,” “on vacations,” and “when I’m with others[.]”<sup>586</sup>

3 426. Snap understands that its user experience must be immersive and all-encompassing  
4 in order to maximize its advertising revenue. Indeed, Snap recently admitted to its investors that its  
5 revenue could be harmed by, among other things, “a decrease in the amount of time spent on  
6 Snapchat, a decrease in the amount of content that our users share, or decreases in usage of our  
7 Camera, Visual Messaging, Map, Stories, and Spotlight platforms.”<sup>587</sup>

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

9 427. Snap specifically promotes Snapchat to children because they are a key demographic  
10 for Snap’s advertising business.

11 428. In its first post on its website, Snapchat observed that “[t]o get a better sense of how  
12 people were using Snapchat and what we could do to make it better, we reached out to some of our  
13 users. *We were thrilled to hear that most of them were high school students* who were using  
14 Snapchat as a new way to pass notes in class—behind-the-back photos of teachers and funny faces  
15 were sent back and forth throughout the day.”<sup>588</sup>

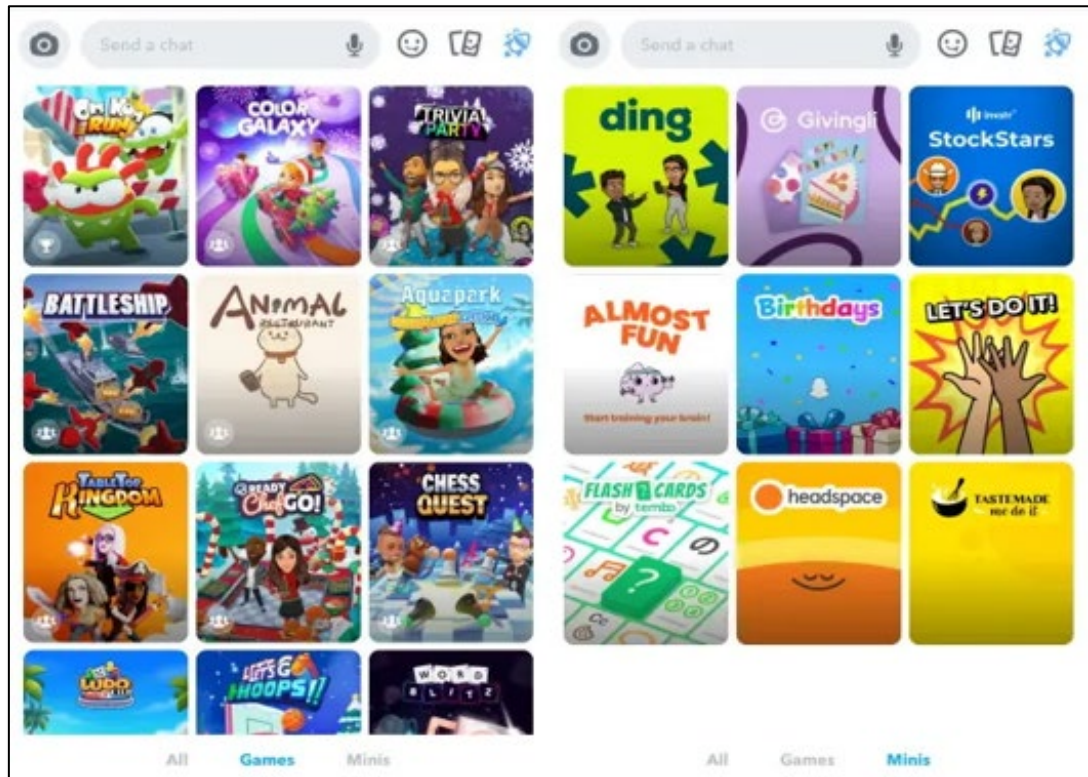
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25 <sup>586</sup> SNAP0000103 at 0113.

26 <sup>587</sup> Snap Inc. Form 10-K at 19 (Dec. 31, 2022), <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001564408/c22ae9bd-7418-456e-82d4-48129de1df54.pdf>.

27 <sup>588</sup> Team Snapchat, *Let’s Chat*, Snapchat Blog at <http://blog.snapchat.com> (May 9, 2012),  
28 <https://web.archive.org/web/20120518003029/http://blog.snapchat.com:80/>.



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



17 430. Similarly, in an October 2019 interview, Snap’s CEO explained that “we’ve seen a  
18 lot of engagement with our 13-34 demographic, which for us is strategically a critical demographic,  
19 not only because that’s a demographic that enjoys using new products but also because I think they  
20 represent, really, the future . . . So that’s obviously been a group that’s been really fun to build for,  
21 and really it started because those are our friends.”<sup>589</sup>

22 431. Snap touts to advertisers its ability to use Snapchat to reach children. In a December  
23 2022 statement to advertisers, Snap claimed that “Snapchat delivers on the emotions that Gen Z  
24 seeks and it does so consistently across the platform in areas like Discover, Stories and the  
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26

27 <sup>589</sup> Evan Spiegel, Co-Founder and CEO of Snap, Inc., Goldman Sachs, at 4:43-6:23. (Oct. 2,  
28 2019), <https://www.youtube.com/watch?v=PQIKv-GCQ-w>.



1 Camera.”<sup>590</sup> To prove that, Snapchat “used a neuroscience measurement called Immersion to  
2 measure reactions to different brand messaging—specifically brand purpose messaging vs. non-  
3 brand purpose messaging. Immersion captures attention and emotional resonance through variations  
4 in heart rate rhythm collected by smartwatches.”<sup>591</sup> Per Snapchat, “[a]ny brand or marketer can get  
5 on any app and *start targeting Gen Z [emphasis added]*. After all, Gen Z is digitally native. But to  
6 effectively connect and engage with this generation, that takes a different, more intentional type of  
7 platform- Snapchat.”<sup>592</sup>

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



24 <sup>590</sup> Snap for Business, *What Does Gen Z Want From Brands?* Dec. 15, 2022),  
25 <https://forbusiness.snapchat.com/en-US/blog/what-does-gen-z-want>.

26 <sup>591</sup> Snap for Business, *What Does Gen Z Want From Brands?* Dec. 15, 2022),  
27 <https://forbusiness.snapchat.com/en-US/blog/what-does-gen-z-want>

28 <sup>592</sup> Snap for Business, *What Does Gen Z Want From Brands?* Dec. 15, 2022),  
<https://forbusiness.snapchat.com/en-US/blog/what-does-gen-z-want>.

1           433. Snapchat’s age verification systems are defective. For the first two years of its  
2 existence, Snap did not even purport to limit user access to those 13 or older.<sup>593</sup> Users were not  
3 required to input a date of birth when creating an account.<sup>594</sup>

4           434. In 2013, Snap belatedly introduced age limits (which, as explained below, it does not  
5 effectively enforce). At the same time, Snap launched a new feature called “Snapkidz” aimed at and  
6 designed to attract younger children users, while hedging against the potential user loss due to the  
7 new age limits. The Snapkidz feature allowed children under the age of 13 to take filtered photos,  
8 draw on them, save them locally on their devices, send them to others, and upload them to other  
9 apps.<sup>595</sup> Although this version prevented children from sharing “Snaps” on the product, it  
10 nonetheless exposed children to Snapchat’s features, which normalized and acclimatized children  
11 to using Snapchat. In addition, nothing prevented children from creating an unrestricted account  
12 with a false date of birth on Snapchat and using the product outside the SnapKidz’s limited  
13 features.<sup>596</sup>

14           435. The SnapKidz feature was discontinued in or around 2016. Snap now purports to  
15 prohibit users under the age of 13. But nothing prohibits the minor user from simply altering their  
16 birthdate during the same session where they were just denied an account for being an underage  
17 user. Snap could have implemented robust, effective age verification protocols. Instead, it has set  
18 up its business and product so that nothing is done to verify the age of its users or to enforce its age  
19

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20 <sup>593</sup> Team Snapchat, *iOS Update: Bug Fixes and More!*, Snapchat Blog (June 22, 2013),  
21 <https://web.archive.org/web/20130627073951/http://blog.snapchat.com:80/>.

22 <sup>594</sup> Team Snapchat, *iOS Update: Bug Fixes and More!*, Snapchat Blog (June 22, 2013),  
23 <https://web.archive.org/web/20130627073951/http://blog.snapchat.com:80/>.

24 <sup>595</sup> Team Snapchat, *iOS Update: Bug Fixes and More!*, Snapchat Blog (June 22, 2013),  
25 <https://web.archive.org/web/20130627073951/http://blog.snapchat.com:80/>.

26 <sup>596</sup> See Larry Magid, *Snapchat Creates SnapKidz – A Sandbox for Kids Under 13*, Forbes (June  
27 23, 2013), <https://www.forbes.com/sites/larrymagid/2013/06/23/snapchat-creates-snapkidz-a-sandbox-for-kids-under-13/?sh=7c682a555e5a>; Anthony Cuthbertson, *Snapchat admits its age verification system does not work*, Independent (Mar. 19, 2019),  
28 <https://www.independent.co.uk/tech/snapchat-age-verification-not-work-underage-ageid-a8829751.html>.

1 limitations. Snap could, but intentionally does not, verify the phone number, email address, or  
2 birthdate used to create accounts, and it allows users to create multiple accounts using the same  
3 email address or phone number.

4 436. Snap’s executives have admitted that Snapchat’s age verification “is effectively  
5 useless in stopping underage users from signing up to the Snapchat app.”<sup>597</sup> Not surprisingly,  
6 underage use is widespread. As of 2021, 13% of children ages 8-12 use Snapchat.<sup>598</sup>

7 437. Once Snapchat is installed on a user’s mobile phone, the product continues to  
8 download and install updates, design changes, and new features from Snapchat directly to its users.

9 438. Similarly, the absence of effective age-verification measures means that users who  
10 are older can claim to be children—which is an obvious danger to the actual children on Snap’s  
11 product.

12 **3. Snapchat is designed to addict children through psychological**  
13 **manipulation.**

14 439. Once Snap entices children to use its product, it uses a series of product features that  
15 are designed to addict children. As laid out below, those features can be broadly grouped into two  
16 categories that exploit techniques discussed earlier in this Complaint. The first are social metrics  
17 and other similar psychological manipulation techniques. The second are features designed to  
18 encourage endless passive consumption of content on the Snapchat product. These features, in  
19 tandem with each other and the other harmful features described throughout this section and  
20 Complaint, induce addiction, compulsive use, and other severe mental and physical harm to the  
21 child users of the Snapchat product, including Plaintiffs.

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24 \_\_\_\_\_  
25 <sup>597</sup> Isobel Asher Hamilton, *Snapchat admits its age verification safeguards are effectively useless*,  
26 *Bus. Insider* (Mar. 19, 2019), <https://www.businessinsider.com/snapchat-says-its-age-verification-safeguards-are-effectively-useless-2019-3>.

27 <sup>598</sup> Victoria Rideout *et al.*, *Common Sense Census: Media use by tweens and teens*, 2021 at 5,  
28 Common Sense Media, [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).

1 a. **Snap designed Snapchat to drive compulsive use through a set of**  
2 **social metrics and other manipulation techniques that induce**  
3 **compulsive use.**

4 440. Snapchat includes a variety of social metrics—such as Snapscores, Snap Streaks, and  
5 Snap Awards—that reward users when they engage with Snapchat and punish them when they fail  
6 to engage with Snapchat. Internal research by Snap has found these psychological manipulation  
7 techniques are highly effective at instilling anxiety about not using Snapchat frequently enough—  
8 and competitor research has confirmed these features are addictive. In tandem with Intermittent and  
9 Variable Rewards (“IVR”), like push notifications and design choices that make it difficult to stop  
10 using the Snapchat product, these induce compulsive use of the product by children.

11 441. These manipulation techniques are so effective in part because Snapchat’s  
12 disappearing messages themselves create a compulsion to engage with the Snapchat product.  
13 Because Snaps typically disappear within ten seconds of being viewed, users feel compelled to reply  
14 immediately. Snap activates the psychological desire to reciprocate the social gesture of sending a  
15 Snap.<sup>599</sup> Snapchat also tells users each time they receive a Snap by pushing a notification to the  
16 recipient’s device. These notifications are designed to prompt users to open Snapchat repetitively,  
17 increasing the overall time spent on the app.

18 (i) ***Snapcores***

19 442. Snapcores were one of the earliest features of the Snapchat product. Almost as soon  
20 as Snapchat launched, Snap gave users the ability to draw and color on Snaps and add a short text  
21 caption before sending. An Android version of the app, video sharing, and user profiles with  
22 “Snapcores” soon followed.<sup>600</sup>  
23  
24

25 <sup>599</sup> Nir Eyal, *The Secret Psychology of Snapchat*, Nir & Far (Apr. 14, 2015),  
26 <https://www.nirandfar.com/psychology-of-snapchat/>.

27 <sup>600</sup> Snap Inc. Form S-1 Registration Statement (*hereafter* “Form S-1”) at 91 (Feb. 2, 2017),  
28 <https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm>; Katie  
Notopoulos, *The Snapchat Feature That Will You’re your Life*, BuzzFeed News (Dec. 5, 2012), □

1 443. Originally called “Hiscore,” Snapscore keeps a running profile score based on a  
2 user’s Snapchat activity levels, such as the number of Snaps sent and received or Stories posted.<sup>601</sup>  
3 The sole purpose of Snapscore is to increase product use and drive revenue.<sup>602</sup>



13 444. Although Snap does not disclose precisely how Snapscores work, sending and  
14 receiving a Snap increases the score by one point. Interacting with other product features provides  
15 additional points. A user’s Snapscore is visible on their profile, serves as a signifier of the user’s  
16 “worth,” and encourages users to further engage with Snapchat’s features to increase their score.  
17 Snapscores are important to users, especially young users, because they operate as a form of social  
18 validation, similar to an Instagram “Like.” Google has reported millions of searches for “How to  
19 improve Snap score.” YouTube contains numerous videos with titles like “How to Increase  
20 Snapchat Score Fast.”<sup>603</sup>

21 445. Snapscores reward users who post videos that are viewed extensively. This

23 <sup>601</sup> Snapchat Support, *What is a Snap Score?*, (“Your Snapchat score is determined by a super-secret, special equation... 🤖”) <https://support.snapchat.com/en-US/a/my-score>.

24 <sup>602</sup> Brad Barbz, \*2020 NEW \* *How To Increase Snapscore By Up To 1000 Per Minute On IOS And Android - Working 2020*, YouTube (Dec. 4, 2019), [https://www.youtube.com/watch?v=Mo\\_tajuofLA](https://www.youtube.com/watch?v=Mo_tajuofLA).

27 <sup>603</sup> FozTech, *How to Increase Snapchat Score Fast! (100% Works in 2023)*, YouTube (Oct. 1, 2019), <https://www.youtube.com/watch?v=m7s0hvQdTok> (*How to Increase Snapchat Score Fast* has 4.3 million views as of April 17, 2023).

1 encourages many to use Snapchat in harmful and dangerous ways, to increase the virality of their  
2 videos and increase their Snapscore. As more users engage with and forward that video to others,  
3 its creator is awarded with an increased Snapscore. Snapchat’s rewards incentivize this dangerous  
4 behavior, resulting too often in physical harm or humiliation in the obsessive pursuit of social  
5 significance.

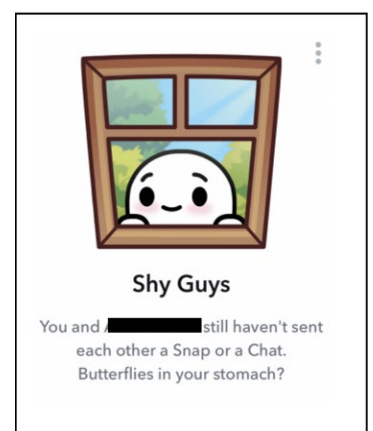
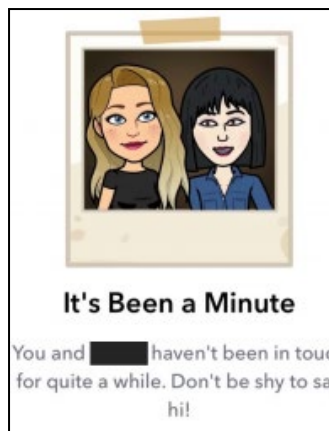
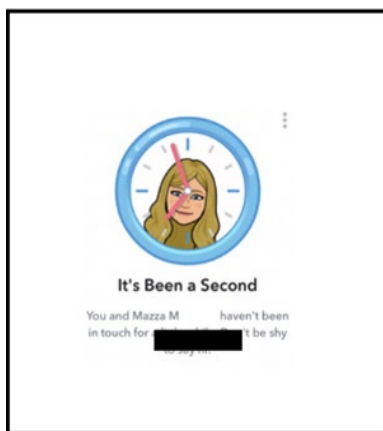
6 **(ii) Trophies, Charms, and Stickers**

7 446. Snap has also designed Snapchat to include user rewards, including trophies and  
8 other social recognition signals, similar to “Likes” on other apps. These features are highly addictive  
9 and drive compulsive use.

10 447. “Trophies” are emojis awarded for achieving engagement milestones or performing  
11 certain activities, such as increasing one’s Snapscore, sending creative Snaps, or posting a live story.  
12 A user’s “Trophies” are displayed in a “trophy box” viewable by their friends. Snap designed this  
13 feature to encourage users to share their videos and posts with the public, promote greater use of  
14 Snapchat, and deepen young users’ addiction to and compulsive use of the product.

15 448. In 2020, Snap phased out Trophies and replaced them with “Charms.” Unlike  
16 Trophies, where users were rewarded for unlocking individual accomplishments like sending 1,000  
17 selfies, Charms reward users for achieving certain milestones in their relationship with other users.  
18 Typically, the more users interact with one another, the more Charms they unlock in their  
19 relationship. Charms are private and viewable only by users’ mutual contacts.

20 449. For example, if two users are at the top of each other’s friends list, meaning they  
21 exchange frequent Snaps, they may unlock a “BFF (Best Friends Forever)” Charm. Conversely, the





1 “It’s Been Forever” and “It’s Been a Minute” Charms may be awarded to friends who are  
2 infrequently in contact, to prompt their engagement with one another on Snapchat. Although there  
3 are a number of different Charms awarded for various reasons, all of them encourage user  
4 interaction, furthering engagement and buy-in to Snap’s reward system. This in turn exacerbates  
5 social-comparison harms and undermines self-esteem.

6  
7 450. Snap incorporates other product features that, like Charms and Trophies, serve no  
8 functional purpose, but make Snapchat more appealing and lead to excessive use by children and  
9 teens. For example, Snap has developed images called “Stickers” for users to decorate the pictures  
10 or videos they post. Snap also offers app-specific emojis and animations that users can apply to their  
11 photos or videos.

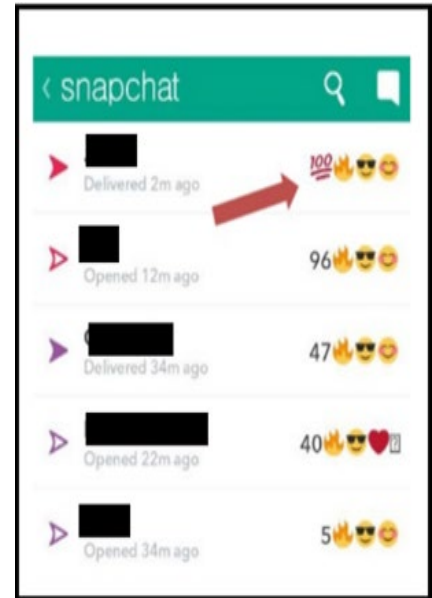
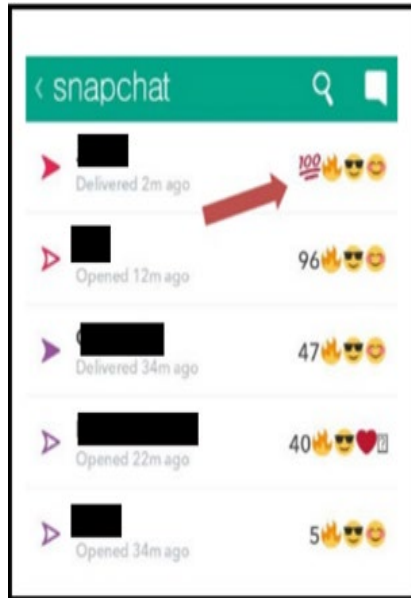
12 451. Snap designed each of these features to function as rewards for increased  
13 engagement, exploit underage users’ desire for social validation, and ultimately compel them to use  
14 Snapchat excessively. Because many of these rewards and scores are visible to others, these features  
15 tap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

17 **(iii) Snap Streak**

18 452. The “Snap Streak” is unique to Snapchat and is an addictive feature “especially to  
19 teenagers.”<sup>604</sup> A Snap Streak is designed to measure a user’s Snapchat activity with another user.  
20 Two users achieve a Snap Streak when they exchange at least one Snap in three consecutive 24-

21  
22 <sup>604</sup> See Cathy Becker, *Experts warn parents how Snapchat can hook in teens with streaks*, ABC  
23 News (July 27, 2017), <https://abcnews.go.com/Lifestyle/experts-warn-parents-snapchat-hook-teens-streaks/story?id=48778296>; Avery Hartmans, *These are the sneaky ways apps like Instagram, Facebook, Tinder lure you in and get you ‘addicted’*, Bus. Insider (Feb. 17 2018),  
24 **Error! Hyperlink reference not valid.**<https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13>;  
25 *see generally* Virginia Smart & Tyana Grundig, *‘We’re designing minds’: Industry insider reveals secrets of addictive app trade*, CBC (Nov. 3, 2017),  
26 <https://www.cbc.ca/news/science/marketplace-phones-1.4384876>; Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017),  
27 <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

1 hour periods. When the Streak is achieved, users receive a fire emoji next to their profile avatar.  
2 Over time, users may be rewarded with additional emojis signifying their Streak. If users reach a  
3 Streak of 100 days, for example, each receives a 100 emoji.



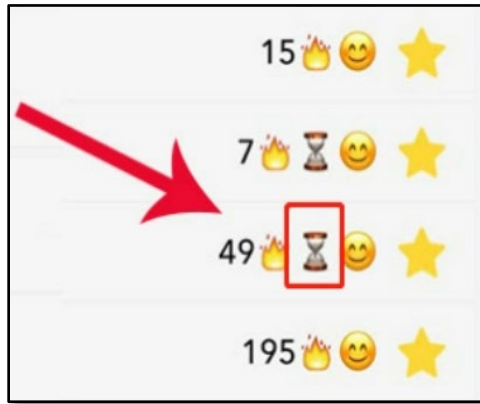
14  
15 453. Snap Streak emojis are similar to Charms in that they reward users for interaction  
16 and are viewable only by mutual friends.

17 454. It is a matter of common knowledge in the social media industry that the Snap Streak  
18 product feature is designed to be addictive. Meta bluntly acknowledged as much in its internal  
19 documents, stating: "Streaks are a very important way for teens to stay connected. They are usually  
20 with your closest friends and they are addictive."<sup>605</sup> Nonetheless, Snap continues to provide this  
21 feature to its adolescent users.

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28 <sup>605</sup> Haugen\_00008303 at 8307.



1           455.   Worse still, to manufacture deeper addiction to its product, Snap sends notifications  
2 to users with an hourglass emoji when Streaks are about to expire—to create extra urgency, nudge  
3 users to keep their Streaks alive, and maintain a system where a user must “check constantly or risk  
4 missing out.”<sup>606</sup>



11           456.   This feature is particularly effective with teenage users since Streaks are “a vital part  
12 of using the app and their social lives as a whole.”<sup>607</sup> Some children become so obsessed with  
13 maintaining their Streaks that they give their friends access to their accounts when they may be  
14 away from their phone for a day or more.<sup>608</sup> Aware of how important maintaining a Snap Streak is  
15 to its users, Snap has even launched a special form on its support website allowing users who lost  
16 their streak to petition to get it back.<sup>609</sup>

19 \_\_\_\_\_  
20 <sup>606</sup> Lizette Chapman, *Inside the Mind of a Snapchat Streaker*, Bloomberg (Jan. 30, 2017),  
<https://www.bloomberg.com/news/features/2017-01-30/inside-the-mind-of-a-snapchat-streaker>.

21 <sup>607</sup> Avery Hartmans, *These are the sneaky ways apps like Instagram, Facebook, Tinder lure you in*  
22 *and get you ‘addicted’*, Bus. Insider (Feb. 17, 2018), [https://www.businessinsider.com/how-app-](https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13)  
23 [developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-](https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13)  
[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).

24 <sup>608</sup> Caroline Knorr, *How to resist technology addiction*, CNN (Nov. 9, 2017),  
25 <https://www.cnn.com/2017/11/09/health/science-of-tech-obsession-partner/index.html>; Jon  
26 Brooks, *7 Specific Tactics Social Media Companies Use to Keep You Hooked*, KQED (June 9,  
2017), [https://www.kqed.org/futureofyou/397018/7-specific-ways-social-media-companies-have-](https://www.kqed.org/futureofyou/397018/7-specific-ways-social-media-companies-have-you-hooked)  
[you-hooked](https://www.kqed.org/futureofyou/397018/7-specific-ways-social-media-companies-have-you-hooked).

27 <sup>609</sup> Snapchat Support, Contact Form, [https://support.snapchat.com/en-US/i-need-](https://support.snapchat.com/en-US/i-need-help?start=5695496404336640)  
28 [help?start=5695496404336640](https://support.snapchat.com/en-US/i-need-help?start=5695496404336640).

1 457. Snap Streaks contribute to feelings of social pressure and anxiety when users lose or  
2 break a Streak. Researchers have found that losing a Streak can cause feelings of betrayal for some  
3 users, especially girls, who reported “negative” feelings when losing a Streak with one of their  
4 friends.<sup>610</sup>

5 458. In 2018, Snap conducted its own internal research on Snap Streaks, which found that  
6 over a third of users reported it was “extremely” or “very important” to keep a Streak going, and  
7 some users reported that the stress level to keep a Streak was “intolerable” or “large.” Snap’s users  
8 reported that Streaks are equally important to Likes on Instagram.<sup>611</sup>

9 459. As this research demonstrates, Streaks are important to users. However, these design  
10 features do not enhance the communication function of the product. Instead, they exploit users’  
11 susceptibility to social pressure and to the compulsive accumulation of other rewards, including  
12 Snap Score points and Charms.

13 **(iv) Push Notifications**

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

20 **(v) Impediments to Discontinuing Use**

21 461. Snap has intentionally and defectively designed its products so child users face  
22 significant navigational obstacles and hurdles when trying to delete or deactivate their Snapchat  
23 accounts, despite the ease with which a user can create one. For example, when a user elects to  
24 delete their account, they cannot do so on demand. The data and the account are preserved for 30  
25

26 <sup>610</sup> Hristoya et al., “Why did we lose our snapchat streak?” Social media gamification and  
27 metacommunication. *Computers in Human Behavior Reports*, 5, 100172 (2022).

28 <sup>611</sup> SNAP0000008.

1 days. In addition, after initiating the deletion process, the user is presented with a black screen  
2 depicting a crying emoji and a message that reads, “Your account will be deactivated, which means  
3 friends won’t be able to contact you on Snapchat. You’ll also lose any Chats you’ve saved and Snaps  
4 and Chats you haven’t opened.”<sup>612</sup>

5 462. This cumbersome process prioritizes user retention and continued use over the well-  
6 being of Snapchat’s users.

7 **b. Snap’s defective features are designed to promote compulsive**  
8 **and excessive use.**

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

10 463. In October 2013, Snap added “Stories,” a feature that generates a compilation of its  
11 users’ designated photos and videos that expire in 24 hours and can be viewed an unlimited number  
12 of times by friends or anyone on Snapchat if the user sets the visibility setting to Everyone.<sup>613</sup> Within  
13 eight months of launching the Stories feature, users were viewing more Stories per day than  
14 Snaps.<sup>614</sup>

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

22 \_\_\_\_\_  
23 <sup>612</sup> See Snapchat Support, *How do I delete my Snapchat account?*,  
24 <https://support.snapchat.com/en-US/a/delete-my-account1>

25 <sup>613</sup> Darrell Etherington, *Snapchat Gets Its Own Timeline With Snapchat Stories, 24-Hour Photo &*  
26 *Video Tales*, TechCrunch (Oct. 3, 2013), <https://techcrunch.com/2013/10/03/snapchat-gets-its-own-timeline-with-snapchat-stories-24-hour-photo-video-ales/>.

27 <sup>614</sup> Ellis Hamburger, *Surprise: Snapchat’s most popular feature isn’t snaps anymore*, The Verge  
28 (Jun. 20, 2014), <https://www.theverge.com/2014/6/20/5827666/snapchat-stories-bigger-than-snaps-electric-daisy-carnival>

1           465. In 2016, Snap updated the Stories feature to include recommendations based on an  
2 algorithm that considers “proximity, time, interestingness, or other such metrics.”<sup>615</sup> That same year,  
3 Snap introduced ads between Stories and updated Stories to include “Auto-Advance,” a feature that  
4 starts a new Story automatically after the preceding one ends.<sup>616</sup> This creates an endless cycle of  
5 consumption that Snap knows, or should know, is detrimental to users’ mental health.<sup>617</sup>  
6 Nevertheless, Snap designed and implemented this feature because it is proven to induce a flow state  
7 that increases product use, regardless of whether the use is healthy or enjoyable. Unsurprisingly,  
8 one study of over 2,000 UK residents found 68% of respondents who used Snapchat reported that  
9 “the platform prevented them from sleeping.”<sup>618</sup>

10           466. Since then, Snap has built upon its Stories interface with “Discover,” a feature that  
11 showcases a massive and immersive feed of advertisements to Snapchat’s captive audience. Using  
12 Discover, users may subscribe to an advertiser’s “channel” and watch its Stories; as well as see what  
13 their friends are watching.

14           467. Both Stories and Discover encourage user engagement with Snapchat and increase  
15 the amount of time users spend using the product by making the product more addictive at the  
16 expense of users’ mental health and well-being.

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21 <sup>615</sup> Snapchat, Inc., *Content Collection Navigation and Autoforwarding*, US 20170289234, USPTO  
(Mar. 29, 2016), <https://patents.justia.com/patent/20170289234>.

22 <sup>616</sup> James Vincent, Snapchat will start showing ads between your friends’ stories, The Verge (Jun.  
23 14, 2016), <https://www.theverge.com/2016/6/14/11930386/snapchat-ads-api-stories>; Snapchat,  
24 Inc., *Content Collection Navigation and Autoforwarding*, US 20170289234, USPTO (Mar. 29,  
2016), <https://patents.justia.com/patent/20170289234>.

25 <sup>617</sup> See, e.g., Gino Gugushvili et al., Facebook use intensity and depressive symptoms: a  
26 moderated mediation mode of problematic Facebook use, age, neuroticism, and extraversion at 3,  
BMC Psych. 10, 279 (2022), <https://doi.org/10.1186/s40359-022-00990-7>.

27 <sup>618</sup> Frazer Deans, *Curb Your Snapchat Addiction*, [https://www.wholesome.design/advent-2018/2-](https://www.wholesome.design/advent-2018/2-curb-your-snapchat-addiction/)  
28 [curb-your-snapchat-addiction/](https://www.wholesome.design/advent-2018/2-curb-your-snapchat-addiction/).

1 (ii) “Spotlight’

2 468. In November 2020, Snap launched “Spotlight,” a feature that pushes to users “an  
3 endless feed” that Snap curates from its 300 million daily Snapchat users.<sup>619</sup> Spotlight functions and  
4 appears nearly identical to TikTok, with similar addictive qualities and harms. Snapchat’s Spotlight  
5 feature allows users to make videos that anyone can view, and Snap pays users whose Spotlight  
6 videos go viral, thus serving as yet another reward system that encourages user engagement. After  
7 Snap introduced Spotlight, user time spent on the product increased by over 200%.<sup>620</sup>

8 469. In February 2022, Snap CEO Evan Spiegel told investors that users are spending  
9 more time on Spotlight than almost any other aspect of Snapchat. A year prior, Snap announced  
10 “Spotlight Challenges,” which provided users with cash prizes for creating Spotlight videos with  
11 specific lenses, sounds, or topics, further integrating the user into the Snap ecosystem. Snap claims  
12 it paid out more than \$250 million in cash prizes to Spotlight Challenge participants in 2021 alone.<sup>621</sup>

13 4. **Snap designed Snapchat with features that harm children directly or**  
14 **expose children to harm.**

15 470. Snapchat further contains a number of features which foreseeably cause children  
16 harm above and beyond harms inherent in addiction and compulsive use.

17 a. **Disappearing “Snaps” and “My Eyes Only” encourage**  
18 **destructive behavior among Snap’s teen users.**

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

23 \_\_\_\_\_  
24 <sup>619</sup> Salvador Rodriguez, *Snap is launching a competitor to TikTok and Instagram Reels*, CNBC  
25 (Nov. 23, 2020), <https://www.cnbc.com/2020/11/23/snap-launching-a-competitor-to-tiktok-and-instagram-reels.html>.

26 <sup>620</sup> See *Snap Q4 Earnings Beat Estimates, User Growth Aids Top Line*, Zacks Equity Research  
27 (Feb. 5, 2021), <https://finance.yahoo.com/news/snap-q4-earnings-beat-estimates-153003950.html>.

28 <sup>621</sup> Mia Sato, *Snapchat will put ads within stories and share the money with creators* (Feb. 14,  
2022), <https://www.theverge.com/2022/2/14/22927656/snapchat-snap-stars-stories-ads>.

1           472. Snapchat’s limited display time reduces teenagers’ communication apprehension and  
2 encourages users to send photos depicting deviant behavior.<sup>622</sup> Sexting is a prime example, but  
3 cyberbullying, underage alcohol consumption, and illicit use of narcotics are also commonly the  
4 subject of Snaps. A 2016 survey of pre-teens and teens ages 12-17 found that “dick pics” were  
5 among some of the unwanted content that users—predominantly females—received while using the  
6 app.<sup>623</sup>

7           473. Disappearing Snaps do not operate as advertised. Although designed to disappear  
8 after an allotted time, recipients possess the ability to save or record them at will. This is particularly  
9 harmful to adolescents, who rely on Snap’s representations when taking and sending photos, and  
10 who only learn after the fact that recipients have the means to save photos or videos. In some cases,  
11 this can lead to sexual exploitation.

12           474. Snap could, but does not, warn users, including children and teenagers, that Snaps  
13 may not necessarily disappear.

14           475. In addition, and especially for pre-teen users, Snaps are defective because Snap’s  
15 parental controls are ill-equipped to mitigate the risks posed by this feature. As set forth below, even  
16 with parental controls activated, parents are unable to view a Snap’s content and therefore cannot  
17 adequately protect their children and/or deter their children from engaging in dangerous behavior in  
18 conjunction with sending Snaps.

19           476. “My Eyes Only” is yet another defective feature of Snapchat. This feature enables  
20 and encourages users to hide harmful content from their parents in a special tab that requires a  
21 passcode. Content cannot be recovered from “My Eyes Only”—allegedly even by Snap itself. Snap  
22 designed “My Eyes Only” knowing it would likely be used to store potentially illegal and injurious  
23 photos and images like sexts and CSAM. This dangerous product feature unreasonably increases  
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25 <sup>622</sup> See Vaterlaus et al., “*Snapchat is more personal*”: *An exploratory study on Snapchat*  
26 *behaviors and young adult interpersonal relationships*, *Computers in Human Behavior*, 62, 594-  
601 (2016).

27 <sup>623</sup> Kofoed et al., (2106) *A snap of intimacy: Photo-sharing practices among young people on*  
28 *social media*, *First Monday* 21(11), <https://doi.org/10.5210/fm.v21i11.6905>.

1 the risk that Snapchat’s adolescent users, many under age 13, will be targeted and sexually exploited  
2 and/or trafficked by child predators.

3 477. The content in “My Eyes Only” self-destructs if a user attempts to access the hidden  
4 folder with the wrong code. “My Eyes Only” has no practical purpose or use other than to hide  
5 potentially dangerous content from parents and/or legal owners of the devices used to access  
6 Snapchat. Moreover, while this information and evidence should be in Snap’s possession and  
7 control, it has designed this feature in a way that causes the permanent loss of relevant, material,  
8 and incriminating evidence.

9 **b. Snapchat’s “Snap Map” feature endangers children.**

10 478. Snapchat also contains a feature called “Snap Map” that allows users to share their  
11 location with their followers (and the public) on an activity-level-based, color-coded heatmap. At  
12 all relevant times, this feature has been available to all users, including minors. Although users can  
13 disable “Snap Map,” this is not a default setting.

14 479. Researchers have found that Snap Map causes feelings of sadness and anxiety for  
15 some users, as they jealously view their friends’ locations.<sup>624</sup> For young people especially, such  
16 social comparison often leads to distress and depression.

17 480. Snap Map also functions as a social metric. A report by 5Rights, a United Kingdom-  
18 based children’s online safety advocacy group highlighted the experience of John, a 14-year-old  
19 boy, who explained that “[h]aving more connections on Snapchat makes his Snap Map look more  
20 crowded, which he can then show off to people in real life and therefore appear more ‘popular.’”<sup>625</sup>

21 **c. Snapchat’s “Quick Add” feature endangers children.**

22 481. Through a feature known as “Quick Add,” Snap recommends new, sometimes  
23 random friends, similar to Facebook’s “People You Might Know” feature. Suggestions are  
24 formulated using an algorithm that considers users’ friends, interests, and location. Quick Add

25 \_\_\_\_\_  
26 <sup>624</sup> See Dunn et al., “*Oh, Snap!*”: A Mixed-Methods Approach to Analyzing the Dark Side of  
Snapchat, *The Journal of Social Media in Society*, 9(2), 69-104 (2020).

27 <sup>625</sup> 5Rights Foundation, *Pathways: How digital design puts children at risk* (July 2021),  
28 <https://5rightsfoundation.com/uploads/Pathways-how-digital-design-puts-children-at-risk.pdf>.

1 encourages users to expand their friend base to increase their Snapscore by interacting with an ever-  
2 expanding group of friends, which--in addition to expanding their time online--can result in  
3 exposure to dangerous strangers. Of particular concern, until 2022, Quick Add's suggestions  
4 included profiles for users Snap knew to be between the ages of 13-17, meaning that Quick Add  
5 could, and in fact did, recommend that a minor and adult user connect.

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

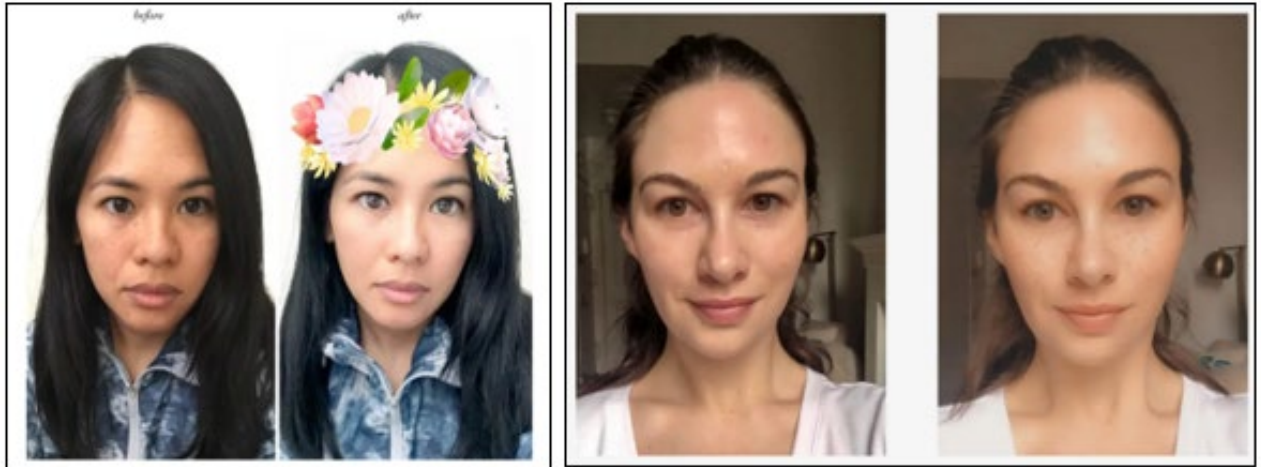
8 483. In 2022, Snap revised the Quick Add feature to limit the friend suggestions promoted  
9 to minor users. For those aged 13 to 17, Quick Add would only suggest friends who shared a certain  
10 number of common friends with the minor user. Snap did not disclose how many common friends  
11 must be shared by each user to satisfy this safety feature. Further, this modification to the Quick  
12 Add feature still does not prohibit the connection of minors with adults.

13 **d. Snapchat's Lenses and Filters features promote negative**  
14 **appearance comparison.**

15 484. Snap also incorporates numerous custom-designed lenses and filters, which allow  
16 users to edit and overlay augmented-reality special effects and sounds on their Snaps. Many of  
17 Snapchat's lenses and filters change users' appearance and face, creating unrealistic, idealized  
18 versions that cause profound body image issues in teenagers, especially girls.

19 485. Examples of these features include the Smoothing Filter, which blurs facial  
20 imperfections and evens out skin tone; Bold Makeup, which adds makeup over the user's face, blurs  
21 imperfections, and evens out skin tone; Sunkissed and Cute Freckles, which adds freckles over the  
22 nose and cheeks, blurs imperfections, evens out skin tone, and adjusts skin color; Face and Body  
23 Mellow Glow, which smooths the face and body and adjusts skin color; and Fluffy Eyelashes, which  
24 alters the shape of the user's face by lifting their eyes and adding more pronounced cheek bones.  
25 The common theme among all of these filters is that they remove the subjects' perceived blemishes  
26 to create the perfect "selfie."  
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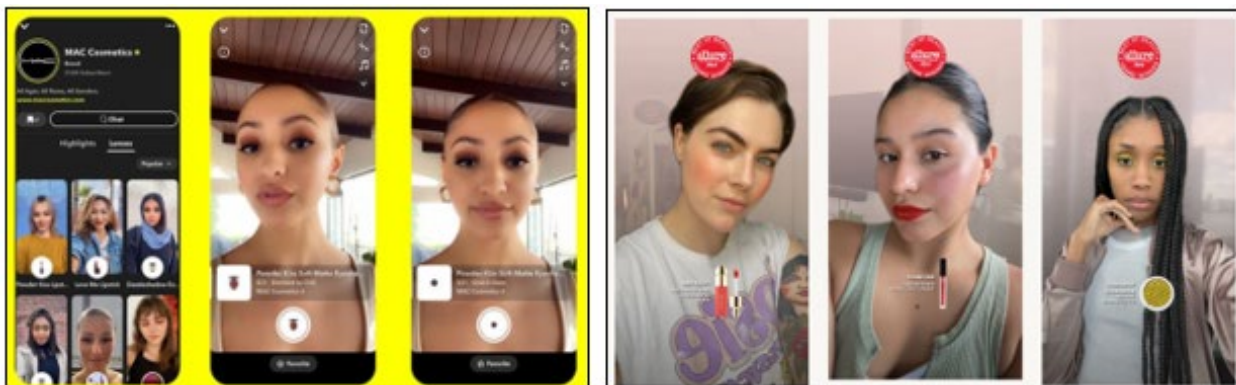
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10 486. A 2017 study found that these features made Snapchat one of the worst social media  
11 products for the mental health of children and adolescents, behind only Instagram.<sup>626</sup> In recent years,  
12 plastic surgeons have reported an increase in requests for alterations that correspond to Snapchat’s  
13 filters. This has led researchers to coin the term “Snapchat Dysmorphia,” in which the effect of  
14 Snapchat’s filters triggers body dysmorphic disorder.<sup>627</sup> The rationale underlying this disorder is  
15 that beauty filters on Snapchat create a “sense of unattainable perfection” that leads to self-alienation  
16 and damages a person’s self-esteem.<sup>628</sup> One social psychologist summarized the effect as “the  
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20 <sup>626</sup> Kara Fox, *Instagram worst social media app for young people’s mental health*, CNN (May 19,  
21 2017), <https://www.cnn.com/2017/05/19/health/instagram-worst-social-network-app-young-people-mental-health/index.html>.

22 <sup>627</sup> Chen et al., *Association Between Social Media and Photograph Editing Use, Self-esteem, and*  
23 *Cosmetic Surgery Acceptance*, JAMA Facial Plastic Surgery, 2019; See also Nathan Smith &  
24 Allie Yang, *What happens when lines blur between real and virtual beauty through filters*, ABC  
25 News (May 1, 2021), <https://abcnews.go.com/Technology/lines-blur-real-virtual-beauty-filters/story?id=77427989>.

26 <sup>628</sup> Chen et al., *Association Between Social Media and Photograph Editing Use, Self-esteem, and*  
27 *Cosmetic Surgery Acceptance*, JAMA Facial Plastic Surgery, 2019; See also Nathan Smith &  
28 Allie Yang, *What happens when lines blur between real and virtual beauty through filters*, ABC  
News (May 1, 2021), <https://abcnews.go.com/Technology/lines-blur-real-virtual-beauty-filters/story?id=77427989>.

1 pressure to present a certain filtered image on social media [which] can certainly play into  
2 [depression and anxiety] for younger people who are just developing their identities.”<sup>629</sup>



9 487. Snap also created and promoted “smart filters” that allowed users to stamp date/time,  
10 temperature, battery life, altitude, and speed on their Snaps.<sup>630</sup> These filters utilize sensor data on  
11 users’ devices to provide the desired filter stamp.

12 488. A particularly dangerous smart filter is the speed filter, which from 2013 to 2021  
13 allowed users to record their real-life speed and overlay that speed onto Snaps. Snap knew, or should  
14 have known, that the speed filter served no purpose other than to motivate, incentivize, and/or  
15 encourage users to drive at dangerous speeds in violation of traffic and safety laws. Indeed, soon  
16 after launching its speed filter, the feature became a viral game for users—particularly teenage  
17 users—to capture photos and videos of themselves driving at 100 miles-per-hour or more.  
18 Tragically, the quest to capture a 100 mile-per-hour Snap caused a number of fatal vehicle accidents  
19 involving teens and young adults.<sup>631</sup>

21 <sup>629</sup> Nathan Smith & Allie Yang, *What happens when lines blur between real and virtual beauty*  
22 *through filters*, ABC News (May 1, 2021), <https://abcnews.go.com/Technology/lines-blur-real-virtual-beauty-filters/story?id=77427989>.

23 <sup>630</sup> Karissa Bell, *Snapchat adds an altitude filter to show how high you are*, (Aug.19, 2016),  
24 <https://mashable.com/article/snapchat-altitude-filter-how-to>.

25 <sup>631</sup> *Did Snapchat play role in deaths of 3 young women?*, ABC6 Action News (Feb. 16, 2016),  
26 <https://6abc.com/action-news-investigation-snapchat-fatal-car-crash-philadelphia/1196846/>;  
27 Manpreet Darroch, *Snapchat and driving . . . you could be sending your last snap* (Apr.25, 2016),  
28 <http://www.youthforroadsafety.org/news-blog/news-blog-item/t/snapchat-and-driving-hellip-you-could-be-sending-your-last-snap>;  
*The Most Dangerous App on Your Phone*, [DistractedDriverAccidents.com](https://distracteddriveraccidents.com/the-most-dangerous-app-on-), <https://distracteddriveraccidents.com/the-most-dangerous-app-on->

1           489. Snap knew, or should have known, its speed filter created an unreasonable risk of  
2 harm to its users and the public. Despite this knowledge, however, as well as pleas from the public  
3 to disable the filter, Snap refused to remove the filter from its application until 2021.<sup>632</sup>

4           490. By including features like lenses, cartoonish filters, and stamps to attract ever-  
5 increasing numbers of children to use and engage with its product, Snap has knowingly created a  
6 product that leads to excessive use by children and teens and causes them to suffer harm.

7                           **5. Snap has implemented ineffective and misleading parental controls,**  
8                           **further endangering children.**

9           491. Snap has also designed and set up Snapchat with inadequate parental controls.

10           492. From Snapchat’s launch in 2011 until August 2022, Snapchat had no parental  
11 controls even though its core user base was under the age of 18 and a significant number of those  
12 users were under the age of 13.

13           493. In August 2022, Snap introduced the “Family Center.” The features and processes  
14 offered through the Family Center are woefully inadequate to protect teen and pre-teen users. The  
15 Family Center allows a parent or guardian to install Snapchat on their phone and then link to the  
16 child’s account. The parent or guardian can then see who the child user is communicating with.  
17 However, the content of these communications remains hidden and still disappears after the allotted  
18 time. In addition, the Family Center does not allow a parent or guardian to block minors from  
19 sending private messages, control their child’s use or engagement with many of Snapchat’s product  
20 features, control their child’s use of Snapchat’s geolocation feature, or control who their child may  
21 add to their friend list. Finally, the Family Center fails to help a parent monitor their child’s account  
22 when the child has secretly created a Snapchat account without the parents’ knowledge in the first  
23 place.

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26 [your-phone/](#).

27 <sup>632</sup> Bobby Allyn, *Snapchat Ends ‘Speed Filter’ That Critics Say Encouraged Reckless Driving*,  
28 NPR (June 17, 2021), <https://www.npr.org/2021/06/17/1007385955/snapchat-ends-speed-filter-that-critics-say-encouraged-reckless-driving>.

1                   **6.       Snap facilitates the spread of CSAM and child exploitation.**

2           494.   Despite being marketed to and designed for children, Snapchat includes a number of  
3 features that promote and dramatically exacerbate sexual exploitation, the spread of CSAM,  
4 sextortion, and other socially maladaptive behavior that harms children. Snap knows or should have  
5 known that its product features are unsafe for children and that it fails to implement reasonable,  
6 child-protective safeguards. For example, by failing to age-restrict its Discover feature, Snapchat’s  
7 algorithm has recommended inappropriate sexual content to adolescent users. By promoting the  
8 connection between minors and adults, it is facilitating child exploitation and predation. By failing  
9 to implement parental controls that give parents true control over their children’s activity, Snap  
10 allows harmful interactions with predators to continue unnoticed.

11           495.   Like the other Defendants, as a direct consequence of the child exploitation that  
12 occurs on its platform, Snapchat is tainted by illegal material that promotes and facilitates the  
13 continued sexual exploitation of minors. Snap receives value in the form of increased user activity  
14 for the dissemination of CSAM on its product.

15           496.   Furthermore, Snapchat’s disappearing-content design, while appealing to minors,  
16 makes it more difficult for parents to monitor their children’s social-media activity. This feature also  
17 contributes to a sense of impunity for many users, encouraging and fomenting exploitation and  
18 predatory behavior, which has been observed in multiple empirical studies.<sup>633</sup> According to these  
19 studies, Snapchat users believe their conduct is hidden and accordingly feel empowered to engage  
20 in criminal behavior through the product without fear of getting caught.

21           497.   These feelings are promoted by design. Snap intends for the product’s disappearing  
22 messaging to entice users to share highly personal photos and information that many users would  
23 otherwise feel uncomfortable sharing on “higher-stake” apps.<sup>634</sup> In short, this design choice

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25 <sup>633</sup> *Snapchat by the Numbers: Stats, Demographics & Fun Facts*, Omnicore (Mar. 2, 2022),  
26 <https://www.omnicoreagency.com/snapchat-statistics/>.

27 <sup>634</sup> See Evelyn Lopez et al., *The Gratifications of Ephemeral Marketing Content, the Use of*  
28 *Snapchat by the Millennial Generation and Their Impact on Purchase Motivation*, *Global Bus.*  
*Rev.* (2021), <https://journals.sagepub.com/doi/pdf/10.1177/09721509211005676>.

1 encourages and allows minors to share harmful, illegal, and sexually explicit images while providing  
2 predators with a vehicle to recruit victims. Studies have also found that the “close ties” generated  
3 between teenagers on Snapchat foster the conditions for grooming and other predatory behavior.

4 498. As a result, Snapchat is one of the go-to products for sexual predators.<sup>635</sup>

5 499. In 2014, Snap introduced “Snapcash,” a peer-to-peer mobile payment service.  
6 Snapcash provided a way for users to pay for private content with little to no oversight.<sup>636</sup> Snapcash  
7 enabled CSAM and other sexual exploitation, as users were paid with Snapcash to send, receive,  
8 create, publish, save, accept, or otherwise participate in CSAM. It also enabled predators to extort  
9 cash from adolescent users by threatening to disseminate CSAM to other users.

10 500. Snapcash was abruptly removed from Snapchat in 2018 as users were sending  
11 sexually explicit photos and using Snapcash for payment.<sup>637</sup>

12 501. Snapchat also allows users to voice or video call one another in the app.<sup>638</sup> This  
13 feature is dangerous when paired with the many others that permit easy access to minors by  
14 predators, such as Quick Add and Snap Map. It allows predators to call and video chat with minors  
15 in private, with virtually no evidence of what was exchanged. Predators use this function to identify  
16 children willing to add and speak with a stranger, and then prey on the child’s vulnerabilities.

17 502. Collectively, these product features promulgate communication and conduct with a  
18 false sense of intimacy between users and encourage predators to use Snapchat to target children for  
19 grooming, sexual exploitation, sextortion, and CSAM.

20 \_\_\_\_\_  
21 <sup>635</sup> See, e.g., Rebecca Woods, *What Are The Dangers Of Snapchat To Avoid?*, PhoneSpector (June  
16, 2021), <https://phonespector.com/blog/what-are-the-dangers-of-snapchat-to-avoid/>.

22 <sup>636</sup> Kurt Wagner, *Snapchat to Let You Send Money to Friends, Thanks to Square*, Vox,  
23 [https://www.vox.com/2014/11/17/11632930/snapchat-to-let-you-send-money-to-friends-thanks-  
to-square](https://www.vox.com/2014/11/17/11632930/snapchat-to-let-you-send-money-to-friends-thanks-to-square).

24 <sup>637</sup> Christian Hargrave, *Snapcash Goes Away After Excessive Feature Misuse*. App Developer  
25 Magazine (July 25, 2018), [https://appdeveloper magazine.com/snapcash-goes-away-after-  
excessive-feature-misuse/](https://appdeveloper magazine.com/snapcash-goes-away-after-excessive-feature-misuse/).

26 <sup>638</sup> Snapchat Support, *How to Start a Video Chat on Snapchat*, [https://support.snapchat.com/en-  
GB/a/video-  
27 chat#:~:text=You%20can%20Video%20Chat%20with,into%20a%20full%2Dscreen%20Chat](https://support.snapchat.com/en-GB/a/video-chat#:~:text=You%20can%20Video%20Chat%20with,into%20a%20full%2Dscreen%20Chat).  
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1           503. In November 2019, a bipartisan group of Senators sent a letter to leading tech  
2 companies, including Snapchat. The letter sought answers about the online sexual grooming of  
3 children and CSAM detection technologies.<sup>639</sup> The following year, ParentsTogether, a national  
4 parent group, delivered a petition from 100,000 parents to Snap demanding that the company do  
5 more to “protect children from sexual abuse and exploitation” on Snapchat.<sup>640</sup> The petition listed  
6 numerous examples of widespread online sexual grooming of children, including: a high school  
7 coach in New Mexico who used Snapchat to extort sexual videos from several girls as young as  
8 fourteen; a Cleveland man who posed as a therapist and blackmailed a thirteen-year-old girl into  
9 sending him sexual videos and photos; and a Virginia man who was arrested for running a sextortion  
10 ring on Snapchat, coercing children into sending sexually explicit material.<sup>641</sup>

11           504. In response, Snap announced that by Fall of 2020, it would deploy technology in  
12 addition to Microsoft’s PhotoDNA to help stop the spread of CSAM through its product.

13           505. By failing to utilize these technologies until late 2020, Snap harmed adolescent users  
14 as its product contributed to child exploitation, sextortion, and the spread of CSAM.

15           506. In addition, while Snapchat allows users to report harmful images or videos, they  
16 cannot specifically report CSAM that is sent to a user via direct messaging, including from another  
17 user’s camera roll.

18           507. Snapchat’s disappearing messages cannot be reported at all.

19           508. While Snap states that it is using “technology to identify *known* illegal images and  
20 videos of CSAM and report them to NCMEC,” it does not address how Snapchat’s design

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23 \_\_\_\_\_  
24 <sup>639</sup> *Letter to Sundar Pichai and 36 other Tech Companies by Senate Committee* (Nov. 18, 2019),  
<https://www.blumenthal.senate.gov/imo/media/doc/11.18.19%20-%20Google%20-%20CSAM.pdf>.

25  
26 <sup>640</sup> *Snapchat: Prevent Pedophiles from Sharing Abuse Videos*, <https://parents-together.org/snapchat-petition>.

27 <sup>641</sup> *Snapchat: Prevent Pedophiles from Sharing Abuse Videos*, <https://parents-together.org/snapchat-petition>.  
28



1 contributes to the ongoing proliferation of CSAM materials and the sexual exploitation of its  
2 adolescent users.

3 509. Utilizing the data and information it collects about Snapchat’s users, Snap could  
4 detect, report, and take actions to prevent instances of sexual grooming, sextortion, and CSAM  
5 distribution.

6 510. Despite receiving numerous reports regarding how its product’s features contribute  
7 to child exploitation, Snap has elected to keep many of these features in place.<sup>642</sup> It has done so  
8 because removing them would significantly diminish Snapchat’s popularity and negatively impact  
9 profits.

10 511. Notwithstanding these glaring flaws, Snap advertises and promotes its product as  
11 safe and fun. Snap’s Vice President of Global Public Policy, Jennifer Stout, stated in written  
12 testimony to a Senate Subcommittee that Snap takes “into account the unique sensitivities and  
13 considerations of minors when we design products”<sup>643</sup> when, in fact, Snap intentionally designed its  
14 product to promote compulsive and excessive use and help underage users conceal information from  
15 their parents. Stout claimed that Snap makes it harder for strangers to find minors when, in fact,  
16 Snapchat’s “Quick Add” feature is responsible for introducing minors to complete strangers, and its  
17 “Snap Map” feature has enabled threats, exploitation, and location of minors by complete strangers.  
18 Likewise, Snap’s Head of Global Platform Safety, Jacqueline Beauchere, represented to the public  
19 that “Snapchat is designed for communications between and among real friends; it doesn’t facilitate  
20 connections with unfamiliar people like some social media platforms.”<sup>644</sup> But again, this is not true  
21 and/or historically was not the case.

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23 <sup>642</sup> See, e.g., Zak Doffman, *Snapchat Has Become A ‘Haven For Child Abuse’ With its “Self-  
24 Destructing Messages’*, Forbes (May 26, 2019),  
25 <https://www.forbes.com/sites/zakdoffman/2019/05/26/snapchats-self-destructing-messages-have-created-a-haven-for-child-abuse/?sh=411b8e1d399a>.

26 <sup>643</sup> Snap’s Senate Congressional Testimony - Our Approach to Safety, Privacy and Wellbeing,  
27 <https://values.snap.com/news/senate-congressional-testimony-our-approach-to-safety-privacy-and-wellbeing>.

28 <sup>644</sup> *Snap’s Meet Our Head of Global Platform Safety*, <https://values.snap.com/news/meet-our->

1           512. In addition, Snap knows or should have known, that its products facilitate and  
2 encourage the production, possession, distribution, receipt, transportation, and dissemination of  
3 millions of materials that exploit children and violate child pornography laws. Snap further knows,  
4 or should have known, that its product facilitates the production, possession, distribution, receipt,  
5 transportation, and dissemination of materials that depict obscene visual representations of the  
6 sexual abuse of children.

7           513. Upon information and belief, Snap has developed, or is developing, artificial  
8 intelligence technology that detects adult users of Snapchat who send sexually explicit content to  
9 children and receive sexually explicit images from children. This technology furnishes Snap with  
10 actual knowledge that a significant number of minor users of Snapchat are solicited to send, and do  
11 send, sexually explicit photos and videos of themselves to adult users.<sup>645</sup>

12                       7.       **Snap failed to adequately warn Plaintiffs about the harms its product**  
13                                       **causes or provide instructions regarding safe use.**

14           514. Since Snap’s inception, it has failed to warn adolescent users about its products’  
15 physical and mental health risks. These risks include, but are not limited to, addiction, compulsive  
16 and excessive use, sexual exploitation by adult users, dissociative behavior, social isolation, and an  
17 array of mental health disorders like body dysmorphia, anxiety, depression, and insomnia.

18           515. Snap targets adolescent users via advertising and marketing materials distributed via  
19 digital and traditional media, including expensive advertisements placed during high-profile  
20 sporting events. Snap fails to warn the targets of these ads—often minors—about the physical and  
21 mental risks associated with using Snapchat.

22           516. Snap further fails to warn adolescent users during the product registration process.  
23 At account setup, Snap’s product contains no warning labels, banners, or conspicuous messaging to  
24 adequately inform adolescent users of the known risks and potential physical and mental harms

25  
26  
27 [head-of-global-platform-safety](#).

28 <sup>645</sup> See SNAP0000001-SNAP0000002.



1 associated with usage of its product. Instead, Snap allows adolescent users to easily create an  
2 account (or multiple accounts) and fully access the product.

3 517. Snap’s lack of adequate warnings continues after an adolescent has the Snapchat  
4 product. Snap does not adequately inform adolescent users that their data will be tracked, used to  
5 help build a unique algorithmic profile, and potentially sold to Snap’s advertising clients, who will  
6 in turn use the data to target and profile the user.

7 518. Alarmingly, Snap also does not warn adolescent users before facilitating adult  
8 connections and interactions that adult predators use its product. It also fails to instruct adolescent  
9 users on ways to avoid unknown adults on Snap.

10 519. Snap also fails to warn adolescent users who exhibit problematic signs of addiction  
11 or are habitually and compulsively accessing the app. Instead, Snap utilizes push notifications to  
12 encourage engagement with Snapchat.

13 520. In addition, despite proactively providing adolescent users with countless filtering  
14 and editing tools, Snap does not warn its adolescent users regarding the mental health harms  
15 associated with those heavily filtered images.

16 521. Snap’s failure to properly warn and instruct adolescent users has proximately caused  
17 significant harm to Plaintiffs’ mental and physical well-being, and other injuries and harms as set  
18 forth herein.

19 522. Snap also fails to warn parents about all of the foregoing dangers and harms inherent  
20 in the addictive design of its product.

21 Snap’s failure to adequately warn and instruct as set forth herein proximately caused  
22 significant harm to Plaintiffs’ mental and physical well-being, and other injuries and harms  
23 as set forth herein.

24 **D. FACTUAL ALLEGATIONS AS TO BYTEDANCE**

25 523. TikTok Inc. captures vast swaths of information from its users, both on and off the  
26 TikTok platform, including Internet and other network activity information—such as location data  
27 and browsing and search histories. ByteDance Ltd exclusively controls and operates the TikTok  
28 platform. In his recent testimony before the House Energy and Commerce Committee, TikTok CEO

1 Shou Chew admitted that he reports directly to ByteDance Ltd CEO Liang Rubo. ByteDance Ltd.  
2 admits that its personnel outside the United States can access information from American TikTok  
3 users including public videos and comments. On information and belief, ByteDance Ltd also has  
4 access to United States TikTok users' private information.

5 524. Despite efforts to portray TikTok as separate from Douyin (the Chinese version of  
6 TikTok),, the two companies share many overlapping personnel and technologies, as the recent  
7 report "TikTok, ByteDance and Their Ties to the Chinese Communist Party," produced by the  
8 Australian Senate Select Committee on Foreign Interference Through Social Media, makes clear.  
9 TikTok's engineering manager works on both TikTok and Douyin, and TikTok Inc.'s development  
10 processes are closely intertwined with Douyin's processes. TikTok Inc.'s employees and data  
11 systems are also deeply interwoven into Byte Dance Ltd's ecosystem.

12 525. In addition to showing that ByteDance Ltd is highly integrated with TikTok Inc., the  
13 Australian Senate Report notes that ByteDance Ltd is heavily influenced by the Chinese Communist  
14 Party. The report notes ByteDance Ltd's Editor in Chief, Zhang Fuping, is a Chinese Communist  
15 Party Secretary. The Australian Senate report concludes that ByteDance Ltd is a hybrid state-private  
16 entity at least partially controlled by the Chinese government.

17 526. Bytedance, Ltd. designed and operates the Lark communication platform for use by  
18 all its subsidiaries, including Bytedance, Inc. and TikTok, Inc. All Bytedance, Ltd, Bytedance, Inc.  
19 and TikTok, Inc, personnel have a Lark account and accompanying profile. All oral, video, and  
20 written communications between Bytedance Ltd, Bytedance, Inc., and TikTok, Inc. employees are  
21 either conducted face-to-face or through Lark. All written communications or documents exchanged  
22 through Lark are stored on Lark's database. Lark also provides a real-time translation subtitling for  
23 oral and video communications between English-speaking and Chinese-speaking personnel.  
24 Transcripts of these translated oral and video conversations are stored on Lark's database.

25 527. Since its launch, TikTok has grown exponentially. In late 2021, its owner and creator  
26 ByteDance publicly stated that TikTok had 1 billion active global users, up from 55 million in early  
27  
28

1 2018 and 700 million in mid-2020.<sup>646</sup> TikTok CEO Shou Chew recently testified that the app  
2 currently has over 150 million monthly active users in the United States.<sup>647</sup>

3 528. A large portion of TikTok’s user base is comprised of American children. In July  
4 2020, TikTok reported that more than one-third of its 49 million daily users in the United States  
5 were 14 or younger.<sup>648</sup> More recently, a 2022 Pew Research Center survey reported that 67% of  
6 American teenagers (age 13-17) use TikTok, with most American teenagers (58%) using the product  
7 daily. Among teenage TikTok users, a quarter say they use the site or app almost constantly.<sup>649</sup> In  
8 another recent report, more than 13% of young users declared they “wouldn’t want to live without”  
9 TikTok.<sup>650</sup>

10 529. TikTok’s capture of the American youth market is no accident, but instead the result  
11 of a carefully executed campaign. Early on, Alex Zhu, one of TikTok’s creators, recognized that  
12 “[t]eenagers in the U.S. [were] a golden audience” for this emerging social media product.<sup>651</sup> To  
13 cash in on this gold, ByteDance implemented a series of product features designed to attract and  
14

15 \_\_\_\_\_  
16 <sup>646</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>.

17 <sup>647</sup> Shou Chew, Written Statement of Testimony Before the U.S. House Committee on Energy and  
18 Commerce, March 23, 2023,  
19 [https://d1dth6e84htgma.cloudfront.net/Written\\_Testimony\\_of\\_Shou\\_Chew\\_c07504eccf\\_084e8683f3.pdf?updated\\_at=2023-03-22T03:10:22.760Z](https://d1dth6e84htgma.cloudfront.net/Written_Testimony_of_Shou_Chew_c07504eccf_084e8683f3.pdf?updated_at=2023-03-22T03:10:22.760Z).

20 <sup>648</sup> Raymond Zhong & Sheera Frenkel, *A Third of TikTok’s U.S. Users May Be 14 or Under*,  
21 *Raising Safety* Questions, N.Y. Times (Aug. 14, 2020),  
<https://www.nytimes.com/2020/08/14/technology/tiktok-underage-users-ftc.html>.

22 <sup>649</sup> Emily Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,  
23 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

24 <sup>650</sup> Victoria Rideout *et al.*, *Common Sense Census: Media use by tweens and teens, 2021* at 31,  
25 Common Sense Media (2022), [www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web\\_0.pdf](http://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf).

26 <sup>651</sup> Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y.  
27 Times (Aug. 9, 2016), <https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html>.  
28

1 addict young users. As Zhu explained in 2019, “[e]ven if you have tens of millions of users, you  
2 have to keep them always engaged.”<sup>652</sup> This engagement has come at the cost of young users’ health.

3 **1. Background and overview of TikTok.**

4 530. In 2012, Beijing-based technologist Zhang Yiming paired up with American venture  
5 capitalist Matt Huang to launch ByteDance, and its first product Jinri Toutiao (“Today’s  
6 Headlines”), which utilized A.I. to gather and present world news to users on a single feed.

7 531. Following the success of its first product, ByteDance created Douyin in 2016, a  
8 music-based app loosely modeled on the popular app Musical.ly. Musical.ly was a hit in the U.S.,  
9 as American teens gravitated to the platform, which allowed users, including minor users, to create  
10 15-second videos of themselves lip-syncing, dancing, etc. to popular songs and movie scenes, and  
11 then post them to a scrollable feed for other users to see.

12 532. In 2017, ByteDance launched TikTok, a version of Douyin for the non-Chinese  
13 market, and acquired Musical.ly—which, by then, boasted a user base of almost 60 million monthly  
14 active users—for \$1 billion. Nine months later, ByteDance merged its newly acquired app into its  
15 existing product, and a global version of TikTok was born.

16 533. ByteDance’s design of TikTok predecessor Douyin is profoundly different than  
17 TikTok. Douyin serves its Chinese users educational and patriotic content, and limits young people  
18 14-and-under to just 40 minutes per day.<sup>653</sup> TikTok, however, is designed to encourage addictive  
19 and compulsive use and, until recently, had no usage limits for minor users. Far from promoting  
20 educational content, TikTok’s algorithm instead actively sends its young American users down a  
21 harmful rabbit hole of artificially filtered “ideal” body images, dangerous viral challenges, violence,  
22 and self-harm.

23

24 \_\_\_\_\_  
25 <sup>652</sup> Biz Carson, *How A Failed Education Startup Turned into Musical.ly, The Most Popular App*  
26 *You’ve Probably Never Heard Of*, Bus. Insider (May 28, 2016),  
<https://www.businessinsider.com/what-is-musically-2016-5> (emphasis added).

27 <sup>653</sup> Sapna Maheshwari, *Young TikTok Users Quickly Encounter Problematic Posts, Researchers*  
28 *Say*, N.Y. Times (Dec. 14, 2022), <https://www.nytimes.com/2022/12/14/business/tiktok-safety-teens-eating-disorders-self-harm.html>.

1           534. ByteDance operates TikTok for profit, which creates advertising revenue through  
2 maximizing the amount of time users spend on the platform and their level of engagement. The  
3 greater the amount of time that young users spend on TikTok, the greater the advertising revenue  
4 TikTok earns.

5                   **2. ByteDance intentionally encourages youth to use its product and then**  
6                   **leverages that use to increase revenue.**

7           535. ByteDance has designed and aggressively marketed TikTok, the harmful and  
8 addictive version of Douyin, to attract and profit from young Americans.

9           536. Like the other Defendants’ products, TikTok depends on advertising revenue, which  
10 has boomed. TikTok was projected to receive \$11 billion in advertising revenue in 2022, over half  
11 of which is expected to come from the United States.<sup>654</sup>

12           537. The initial iteration of TikTok allowed users to lip sync pop music by celebrities who  
13 appealed primarily to teens and tweens (e.g., Selena Gomez and Ariana Grande). It labeled folders  
14 with names attractive to youth (e.g., “Disney” and “school”); and included in those folders songs  
15 such as “Can You Feel the Love Tonight” from the movie “The Lion King,” “You’ve Got a Friend  
16 in Me” from the movie “Toy Story,” and other renditions covering school-related subjects or school-  
17 themed television shows and movies.<sup>655</sup>

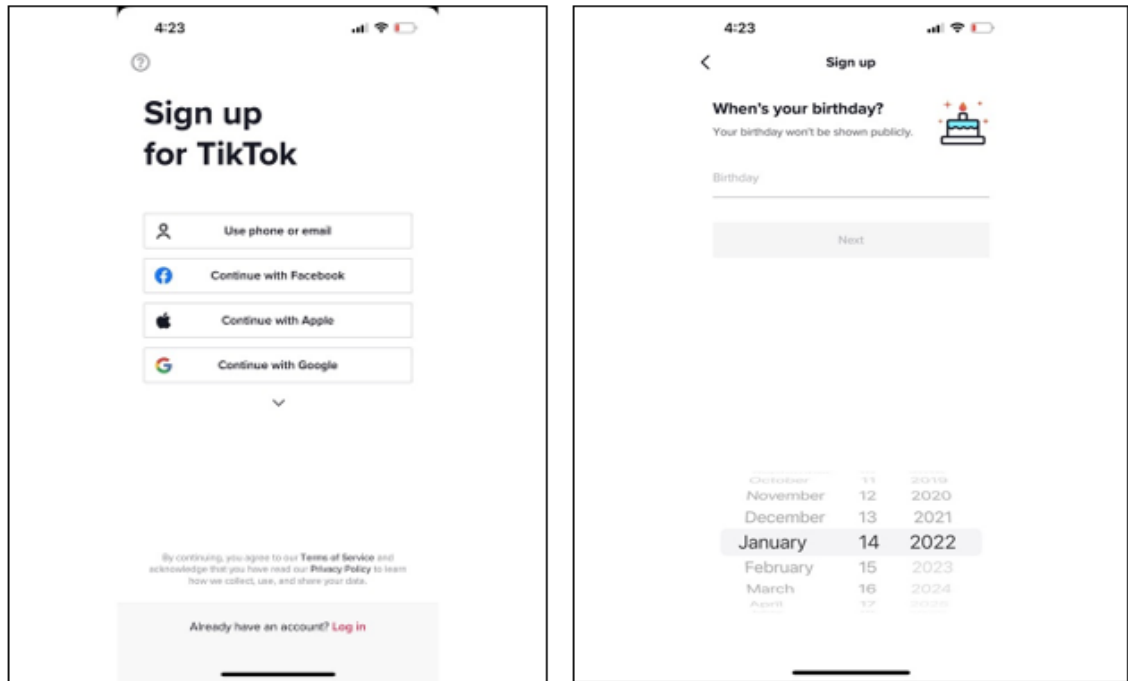
18           538. ByteDance also specifically and intentionally excluded videos that would not appeal  
19 to young Americans, instructing TikTok moderators that videos of “senior people with too many  
20

21  
22  
23 \_\_\_\_\_  
24 <sup>654</sup> Jessica Bursztynsky, *TikTok says 1 billion people use the app each month*, CNBC (Sept. 27,  
25 2021), <https://www.cnbc.com/2021/09/27/tiktok-reaches-1-billion-monthly-users.html>; Bhanvi  
26 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://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/).

27 <sup>655</sup> Complaint for Civil Penalties, Permanent Injunction, and Other Equitable Relief (“Musical.ly  
28 Complaint”) at p. 8, ¶¶ 26–27, *United States v. Musical.ly*, 2:19-cv-01439-ODW-RAO (C.D. Cal.  
Feb. 27, 2019) Dkt. # 1.

1 wrinkles” should not be permitted on users’ “For You” pages because such content was “much less  
2 attractive [and] not worth[] . . . recommend[ing].”<sup>656</sup>

3 539. Even TikTok’s sign-up process demonstrates that young users are what ByteDance  
4 values most. In 2016, the birthdate for those signing up for the app defaulted to the year 2000 (i.e.,  
5 16 years old).<sup>657</sup>



17 **3. ByteDance intentionally designed product features to addict children**  
18 **and adolescents.**

19  
20 540. TikTok’s growth among young Americans has been further enabled by its defective  
21 age verification and parental control procedures, which allow children under 13 unfettered access  
22 to the app, without regard to parental consent, despite the fact that TikTok’s terms of service require  
23 consent of parents or guardians for minors.

24 \_\_\_\_\_  
25 <sup>656</sup> Sam Biddle et al., *Invisible Censorship: TikTok Told Moderators to Suppress Posts by “Ugly”*  
26 *People and the Poor to Attract New Users*, Intercept (Mar. 15, 2020),  
<https://theintercept.com/2020/03/16/tiktok-app-moderatorsusers-discrimination/>.

27 <sup>657</sup> Melia Robinson, *How to Use Musical.ly, The App With 150 million Users That Teens Are*  
28 *Obsessed With*, Bus. Insider (Dec. 7, 2016), <https://www.businessinsider.com/how-to-use-musically-app-2016-12>.

1                                   **a.       TikTok’s age-verification measures are dangerously defective.**

2           541.    When a user first opens TikTok, they are prompted to “Login in to TikTok” or “Sign  
3 up” for an account using a phone number or email address. TikTok then asks, “When’s your  
4 birthday?”

5           542.    ByteDance does not verify the age that TikTok users report. Nor does it use any  
6 method to verify that users who acknowledge they are minors have the consent of their parents or  
7 legal guardians to use the product. In fact, at least as of 2020, TikTok still had not developed a  
8 company position on age verification.<sup>658</sup>

9           543.    ByteDance allows users to utilize TikTok without creating an account, to circumvent  
10 age restrictions. Indeed, TikTok allows users, no matter what age, to “browse as [a] guest,” and  
11 watch TikTok’s “For You” page, while TikTok’s algorithm collects data about that user and their  
12 viewing behavior.<sup>659</sup>

13           544.    ByteDance knows that many U.S. TikTok users under the age of 13 fail to report  
14 their birth dates accurately.<sup>660</sup> In July 2020, TikTok reported that more than a third of its 49 million  
15 daily users in the United States were 14 years old or younger. While some of those users were 13 or  
16 14, at least one former employee reported that TikTok had actual knowledge of children even  
17 younger based on videos posted on the TikTok platform—yet failed to promptly take down those  
18 videos or close those accounts.<sup>661</sup>

19           545.    ByteDance’s Trust and Safety team recognizes that one of the biggest challenges it

20 \_\_\_\_\_  
21 <sup>658</sup> TIKTOK3047MDL-001-00060941 at \*85 (“Minor Safety Policy & PnP,” PowerPoint, January 2021).

22 <sup>659</sup> *Browse as Guest*, TikTok Support, [https://support.tiktok.com/en/log-in-troubleshoot/log-](https://support.tiktok.com/en/log-in-troubleshoot/log-in/browse-as-guest)  
23 [in/browse-as-guest](https://support.tiktok.com/en/log-in-troubleshoot/log-in/browse-as-guest).

24 <sup>660</sup> Jon Russell, *Musical.ly Defends its Handling of Young Users, As it Races Past 40M MAUs*,  
25 TechCrunch (Dec. 6, 2016), [https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-](https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-london/)  
[london/](https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-london/).

26 <sup>661</sup> Raymond Zhong & Sheera Frenkel, *A Third of TikTok’s U.S. Users May Be 14 or Under,*  
27 *Raising Safety Questions*, N.Y. Times, Aug. 14, 2020, available at  
[https://www.nytimes.com/2020/08/14/technology/TikTok-underage-users-](https://www.nytimes.com/2020/08/14/technology/TikTok-underage-users-ftc.html)  
28 [ftc.html](https://www.nytimes.com/2020/08/14/technology/TikTok-underage-users-ftc.html)<https://www.nytimes.com/2020/08/14/technology/TikTok-underage-users-ftc.html>

1 faces is “determining who is a minor (defined as users 13-17 years old).”<sup>662</sup>

2 546. In 2019, the FTC acted on this admission and alleged that ByteDance failed to  
3 comply with Children’s Online Privacy Protection Act of 1998 (“COPPA”).<sup>663</sup>

4 547. TikTok settled the FTC claims, agreeing to a then-record civil COPPA penalty and  
5 several forms of injunctive relief intended to protect children who use the product.<sup>664</sup>

6 548. To comply with the terms of that settlement, ByteDance created “TikTok for  
7 Younger Users,” a “limited app experience” for users under the age of 13.<sup>665</sup> “TikTok for Younger  
8 Users” does not permit users to “share their videos, comment on others’ videos, message with users,  
9 or maintain a profile or followers.”<sup>666</sup> However, users can still “experience what TikTok is at its  
10 core” by recording and watching videos on TikTok. For that reason, experts state the app is  
11 “designed to fuel [kids’] interest in the grown-up version.”<sup>667</sup>

12 549. Moreover, users under 13 can easily delete their age-restricted accounts and sign up  
13 for an over-13 account on the same mobile device—without any restriction or verification—by  
14 simply inputting a fake birthdate. Representative Anne Kuster raised this issue with Tik Tok CEO  
15 Show Chew in his March 23 congressional testimony.<sup>668</sup> She indicated that her staff was able to

16 \_\_\_\_\_  
17 <sup>662</sup> TIKTOK3047MDL-001-00060811 at \*16.

18 <sup>663</sup> See Musical.ly Complaint, at p. 8, ¶¶ 26–27.

19 <sup>664</sup> Natasha Singer, *TikTok Broke Privacy Promises, Children’s Groups Say*, NY Times (May 14,  
20 2020), [https://www.nytimes.com/2020/05/14/technology/tiktok-kids-  
21 privacy.html#:~:text=TikTok%2C%20the%20popular%20app%20for%20making%20and%20shar  
22 ing,20%20children%E2%80%99s%20and%20consumer%20groups%20said%20on%20Thursday](https://www.nytimes.com/2020/05/14/technology/tiktok-kids-privacy.html#:~:text=TikTok%2C%20the%20popular%20app%20for%20making%20and%20sharing,20%20children%E2%80%99s%20and%20consumer%20groups%20said%20on%20Thursday).

22 <sup>665</sup> *TikTok for Younger Users*, TikTok (Dec. 13, 2019), [https://newsroom.tiktok.com/en-us/tiktok-  
23 for-younger-users](https://newsroom.tiktok.com/en-us/tiktok-for-younger-users).

24 <sup>666</sup> Dami Lee, *TikTok Stops Young Users from Uploading Videos after FTC Settlement*, Verge  
25 (Feb. 27, 2019), [https://www.theverge.com/2019/2/27/18243510/tiktok-age-young-user-videos-  
26 ftc-settlement-13-childrensprivacy-law](https://www.theverge.com/2019/2/27/18243510/tiktok-age-young-user-videos-ftc-settlement-13-childrensprivacy-law).

27 <sup>667</sup> Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022),  
28 <https://ifstudies.org/blog/istiktok-dangerous-for-teens>.

<sup>668</sup> Energy and Commerce Committee, *TikTok: How Congress can Safeguard American Data  
Privacy and Protect Children from Online Harms*, Pending Transcript (March 23, 2023)



1 impersonate a minor, and create a different account with a more advanced age, by merely deleting  
2 one and creating another.<sup>669</sup> The staff members did not even need to switch emails. Chew promised  
3 to “look at [this].”<sup>670</sup>

4 550. The absence of effective age verification measures also means that adult users claim  
5 to be children—with obvious dangers to the children on ByteDance’s product.

6 **b. TikTok’s parental controls are dangerously defective.**

7 551. In April 2020, following the FTC settlement, ByteDance created a “Family Pairing”  
8 feature on TikTok. The supposed purpose of that feature was to allow parents to link their accounts  
9 to their children’s accounts and enforce certain controls (such as screen time limits and restriction  
10 of “content that may not be appropriate for all audiences”).<sup>671</sup>

11 552. “Family Pairing” also is supposed to allow parents to prevent their children from  
12 direct messaging other TikTok users. But ByteDance has designed TikTok’s “Family Pairing”  
13 feature so that it is not mandatory for minor users. To use it, a parent or guardian is forced to create  
14 their own TikTok account to pair it with their child’s account. Further, the “Family Pairing” feature  
15 is available only on the TikTok app. It provides no protection when a child accesses TikTok through  
16 a web browser. Because this feature requires parents to know the name of their child’s account to  
17 pair it, youth can easily evade the protections of the “Family Pairing” feature by creating anonymous  
18 accounts, again without parental approval or knowledge.

19  
20 <https://energycommerce.house.gov/events/full-committee-hearing-tik-tok-how-congress-can-safeguard-american-data-privacy-and-protect-children-from-online-harms>

21  
22 <sup>669</sup> *Id.* Energy and Commerce Committee, *TikTok: How Congress can Safeguard American Data Privacy and Protect Children from Online Harms*, Pending Transcript (March 23, 2023)  
23 <https://energycommerce.house.gov/events/full-committee-hearing-tik-tok-how-congress-can-safeguard-american-data-privacy-and-protect-children-from-online-harms> *Id.*

24  
25 <sup>670</sup> *Id.* Energy and Commerce Committee, *TikTok: How Congress can Safeguard American Data Privacy and Protect Children from Online Harms*, Pending Transcript (March 23, 2023)  
26 <https://energycommerce.house.gov/events/full-committee-hearing-tik-tok-how-congress-can-safeguard-american-data-privacy-and-protect-children-from-online-harms> *Id.*

27  
28 <sup>671</sup> *TikTok Introduces Family Pairing*, TikTok Newsroom (April 15, 2020)  
<https://newsroom.tiktok.com/en-us/tiktok-introduces-family-pairing>.

1 553. ByteDance further stymies parents’ ability to supervise minors’ use of TikTok by  
2 permitting minor users to block their parents’ profiles, post ephemeral videos called “Stories” that  
3 disappear after 24 hours, and post those stories to “Friends Only.”

4 554. ByteDance could, but does not, adopt safety features that notify parents when minors  
5 are engaging excessively with the product and are using it during sleeping hours. On the contrary,  
6 until August 2021, ByteDance would send push notifications to young users at all hours of the day  
7 or night to persuade them to log back on to TikTok. Since then, push notifications have been cut off  
8 at 9 pm for users self-identified as 13 to 15 years old, and after 10 pm for users self-identified as 16  
9 or 17 years of age.

10 555. Until January 13, 2021, ByteDance interfered with parental supervision and  
11 endangered children by defaulting all accounts, including those registered to children as young as  
12 13, to “public.” That allowed strangers to contact minor users regardless of age or location.  
13 ByteDance also intentionally and actively promoted these types of connections by suggesting  
14 accounts to follow through the “Find Friends” or “People You May Know” features.

15 556. Today, for users self-identified as 16 and over, ByteDance still sets the default  
16 privacy setting for all registered accounts to “public,” meaning that anyone can view a user’s profile,  
17 on or off TikTok, request the user as a friend, or engage with the user’s content.<sup>672</sup>

18 c. **ByteDance intentionally designed TikTok’s defective features**  
19 **and algorithms to maximize engagement using automatic**  
20 **content, time-limited experiences, intermittent variable rewards,**  
21 **reciprocity, and ephemeral content.**

22 557. Like each of the other Defendants, ByteDance has designed and coded TikTok with  
23 features that foster addictive and compulsive use by youth, leading to a cascade of additional mental  
24 and physical injuries.  
25  
26

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27 <sup>672</sup> See, e.g., Lauren E. Sherman et al., *The Power of the Like in Adolescence: Effects of Peer*  
28 *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>.

1           558. One of TikTok’s defining features is its “For You” page (or “FYP”). According to  
2 ByteDance, it is “central to the TikTok experience and where most of our users spend their time.”<sup>673</sup>

3           559. TikTok’s FYP uses ByteDance’s powerful machine-learning algorithms to select  
4 content to feed users to maximize their engagement and thereby serve ByteDance’s interests—as  
5 opposed to simply responding to searches by users. As one industry commentator explained, TikTok  
6 uses “a machine-learning system that analyzes each video and tracks user behavior so that it can  
7 serve up a continually refined, never-ending stream of TikToks optimized to hold [users’]  
8 attention.”<sup>674</sup>As another commentator put it, “you don’t tell TikTok what you want to see. It tells  
9 you.”<sup>675</sup>

10           560. Zhu has remarked that, “[e]ven if you have tens of millions of users, you have to  
11 keep them always engaged.”<sup>676</sup> Thus, according to Zhu, TikTok’s algorithms are “focused primarily  
12 on increasing the engagement of existing users.”<sup>677</sup>

13           561. An internal document titled “TikTok Algo 101,” which TikTok has confirmed is  
14 authentic, “explains frankly that in the pursuit of the company’s ‘ultimate goal’ of adding daily  
15 active users, it has chosen to optimize for two closely related metrics in the stream of videos it  
16 serves: ‘retention’—that is, whether a user comes back—and ‘time spent.’”<sup>678</sup>

17 \_\_\_\_\_  
18 <sup>673</sup> *How TikTok recommends videos #ForYou*, TikTok (June 18, 2020),  
<https://newsroom.tiktok.com/en-us/howtiktok-recommends-videos-for-you>.

19 <sup>674</sup> Jia Tolentino, *How TikTok Holds Our Attention*, New Yorker (Sept. 30, 2019),  
20 <https://www.newyorker.com/magazine/2019/09/30/how-tiktok-holds-our-attention>.

21 <sup>675</sup> Drew Harwell, *How TikTok Ate the Internet*, Wash. Post. (Oct. 14, 2022),  
22 <https://www.theday.com/business/20221015/how-tiktok-ate-the-internet/>.

23 <sup>676</sup> Biz Carson, *How a Failed Education Startup Turned Musical.ly, the Most Popular App You’ve*  
*Probably Never Heard Of*, Business Insider (May 28, 2016),  
24 <https://www.businessinsider.com/what-is-musically-2016-5> (emphasis added).

25 <sup>677</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-the-](https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quicklycapturing-the-tween-and-teen-m.html)  
26 [video-social-network-quicklycapturing-the-tween-and-teen-m.html](https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quicklycapturing-the-tween-and-teen-m.html).

27 <sup>678</sup> Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021),  
28 <https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html>.

1           562. “This system means that watch time is key,” explained Guillaume Chaslot, the  
2 founder of Algo Transparency.<sup>679</sup> Chaslot noted that “rather than giving [people] what they really  
3 want,” TikTok’s “algorithm tries to get people addicted[.]”<sup>680</sup>

4           563. To fulfill this goal, the TikTok algorithm responds to a user’s time spent watching  
5 and engaging with a video by feeding them similar content.<sup>681</sup> As TikTok describes it, the algorithms  
6 populate each user’s FYP feed by “ranking videos based on a combination of factors” that include,  
7 among others, any interests expressed when a user registers a new account, videos a user likes,  
8 accounts they follow, hashtags, captions, sounds in a video they watch, certain device settings, such  
9 as their language preferences and where they are located, and finally, the likelihood of the user’s  
10 interest.<sup>682</sup>

11           564. ByteDance has designed TikTok’s algorithm so that certain factors, such as time  
12 spent watching a video, are more important to the algorithm than others. For example, TikTok  
13 explained that, “whether a user finishes watching a longer video from beginning to end, would  
14 receive greater weight than . . . whether the video’s viewer and creator are both in the same  
15 country.”<sup>683</sup>

17 <sup>679</sup> Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021),  
18 <https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html>.

19 <sup>680</sup> Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021),  
20 <https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html>.

21 <sup>681</sup> Kaitlyn Tiffany, *I’m Scared of the Person TikTok Thinks I Am*, The Atlantic (June 21, 2021),  
<https://www.theatlantic.com/technology/archive/2021/06/your-tiktok-feed-embarrassing/619257/>.

22 <sup>682</sup> *Investigation: How TikTok’s Algorithm Figures Out Your Deepest Desires*, Wall St. J. (Jul. 21,  
23 2021), <https://www.wsj.com/video/series/inside-tiktoks-highly-secretive-algorithm/investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/6C0C2040-FF25-4827-8528-2BD6612E3796>; *see also* *How TikTok recommends videos #ForYou | TikTok Newsroom*,  
24 <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

25 <sup>683</sup> *Investigation: How TikTok’s Algorithm Figures Out Your Deepest Desires*, Wall St. J. (Jul. 21,  
26 2021), <https://www.wsj.com/video/series/inside-tiktoks-highly-secretive-algorithm/investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/6C0C2040-FF25-4827-8528-2BD6612E3796>; *see also* *How TikTok recommends videos #ForYou | TikTok Newsroom*,  
27 <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

1           565. TikTok’s algorithms are designed to begin working the minute a user opens the app.  
2 The FYP shows the user a single, full-screen stream of videos, then records how the user reacts. “A  
3 second of viewing or hesitation indicates interest; a swipe suggests a desire for something else.”<sup>684</sup>

4           566. With each data point collected, TikTok’s algorithm winnows a mass of content to a  
5 single feed, continually refined to keep users engaging often and at length.

6           567. This algorithmic encouragement of continuous scrolling and interaction makes it  
7 hard for users to disengage from the app. A recent ByteDance-funded study, which imaged the  
8 brains of TikTok and other social media product users, found that those users engaged with TikTok  
9 about 10 times a minute, twice as often as with peer apps.<sup>685</sup>

10          568. ByteDance leverages users’ inability to disengage as a benefit to attract advertisers,  
11 rather than taking steps to address the addictive nature of its product. A recent TikTok marketing  
12 document observed that “the TikTok audience is fully leaned in.”<sup>686</sup> Marketing research  
13 commissioned by TikTok found that, compared to other social media sites, TikTok users evidenced  
14 a higher frequency of rate per minute. TikTok boasted, “[o]ur algorithm and shorter video formats  
15 create continuous cycles of engagement, making TikTok the leading platform for Information  
16 Density.”<sup>687</sup>

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21 <sup>684</sup> *Investigation: How TikTok’s Algorithm Figures Out Your Deepest Desires*, Wall St. J. (Jul. 21,  
22 2021), <https://www.wsj.com/video/series/inside-tiktoks-highly-secretive-algorithm/investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/6C0C2040-FF25-4827-8528-2BD6612E3796>; *see also* *How TikTok recommends videos #ForYou | TikTok Newsroom*,  
23 <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

24 <sup>685</sup> *TikTok Ads Break Through Better Than Tv and Drive Greater Audience Engagement*, TikTok,  
25 <https://www.tiktok.com/business/library/TikTokDrivesGreaterAudienceEngagement.pdf>.

26 <sup>686</sup> *TikTok Ads Break Through Better Than Tv and Drive Greater Audience Engagement*, TikTok,  
27 <https://www.tiktok.com/business/library/TikTokDrivesGreaterAudienceEngagement.pdf>.

28 <sup>687</sup> *TikTok Ads Break Through Better Than Tv and Drive Greater Audience Engagement*, TikTok,  
<https://www.tiktok.com/business/library/TikTokDrivesGreaterAudienceEngagement.pdf>.

1           569. TikTok’s powerful machine-learning algorithms dictate the content of each user’s  
2 FYP. An estimated 90-95% of the content viewed on TikTok comes from its algorithms (as opposed  
3 to user selection), the highest among Defendants’ products.<sup>688</sup>

4           570. The algorithm encourages use of the product, regardless of whether that use is  
5 enjoyable or healthy. TikTok’s algorithm is not designed to direct users to content they want to see,  
6 but rather to content they cannot look away from. From TikTok’s perspective, it does not matter  
7 whether users are engaging with a video because they are horrified, angry, or upset—the  
8 engagement itself is the end goal.

9           571. As the algorithm continues to refine what users see, they are “more likely to  
10 encounter harmful content.”<sup>689</sup> Indeed, TikTok’s quest to monopolize user attention often forces  
11 users down “rabbit holes” of harmful content. Users end up in these rabbit holes, and become trapped  
12 in them, because TikTok has optimized its algorithm’s design for retention and time spent on the  
13 app.<sup>690</sup> TikTok wants to keep users coming back as often as possible for as long as possible, no  
14 matter the cost to the user’s health.

15           572. Once users are in a rabbit hole, it is extremely difficult to climb out. One user was  
16 shown a few anti-vaccination conspiracy theory videos on his FYP, and commented on them to  
17 refute the videos’ claims. His feed was quickly overtaken with similar videos, and it took him  
18 months of intentional interaction with the app to purge this content from his FYP.<sup>691</sup> In general,  
19

20 <sup>688</sup> *Investigation: How TikTok’s Algorithm Figures Out Your Deepest Desires*, Wall St. J. (Jul. 21,  
21 2021), [https://www.wsj.com/video/series/inside-tiktoks-highly-secretive-algorithm/investigation-  
22 how-tiktok-algorithm-figures-out-your-deepest-desires/6C0C2040-FF25-4827-8528-  
2BD6612E3796](https://www.wsj.com/video/series/inside-tiktoks-highly-secretive-algorithm/investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/6C0C2040-FF25-4827-8528-2BD6612E3796).

23 <sup>689</sup> *Inside TikTok’s Algorithm: A WSJ Video Investigation*, Wall St. J. (July 21, 2021),  
24 <https://www.wsj.com/articles/tiktok-algorithm-video-investigation-11626877477>.

25 <sup>690</sup> Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021),  
26 <https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html>.

27 <sup>691</sup> Kaitlyn Tiffany, *I’m Scared of the Person TikTok Thinks I Am*, The Atlantic (June 21, 2021),  
28 <https://www.theatlantic.com/technology/archive/2021/06/your-tiktok-feed-embarrassing/619257/>.

1 escaping a rabbit hole requires a user to repeatedly and actively strategize ways to counter the  
2 algorithm, pitting individual users’ David against TikTok’s machine-learning Goliath.

3 573. The Wall Street Journal documented the pernicious operation of ByteDance’s  
4 algorithms, as shown by a recent experiment. The experimenters used bots, each programmed with  
5 various interests such as sports, forestry, dance, astrology, and animals. They did not disclose these  
6 interests upon registration with TikTok. Instead, TikTok’s algorithm quickly learned the assigned  
7 interests from the bots’ behavior—that is, “by rewatching or pausing on videos” related to the bots’  
8 programmed interests.<sup>692</sup>

9 574. One bot watched 224 videos in 26 minutes, lingering over videos with hashtags for  
10 “depression” or “sad.” The algorithm quickly refined its output. Afterward, 93% of the videos  
11 TikTok showed that bot were about depression or sadness. One post implored the bot to: “Just go.  
12 Leave. Stop trying. Stop pretending. You know it and so do they. Do Everyone a favor and leave.”<sup>693</sup>

13 575. EKO, a consumer watchdog group based in Washington D.C., likewise recently  
14 investigated how the TikTok algorithm pushes suicide content to young children. Using accounts  
15 registered to fictitious 13-year-olds, researchers “liked” or “bookmarked” up to 10 videos with  
16 suicide promotion or other dark, depressing content. They then monitored the next 50 videos the  
17 TikTok algorithm pushed to the accounts. They found that TikTok “served up dangerous suicide  
18 content, including videos with guns being loaded and text suggesting suicide, alongside hundreds  
19 of comments in agreement and some listing exact dates to self-harm or attempt suicide. Beyond  
20 videos explicitly pushing suicide, TikTok’s For You Page was filled with videos promoting content  
21 that pushes despondent and hopeless commentary.” Researchers tracked suicide related hashtags on  
22 TikTok with millions of posts and billions of views. For example, posts with the “sh” hashtag,  
23 which stands for “self-harm,” have over six billion views. Other hashtags, which use common  
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25 \_\_\_\_\_  
26 <sup>692</sup> *Inside TikTok’s Algorithm: A WSJ Video Investigation*, Wall St. J. (July 21, 2021),  
<https://www.wsj.com/articles/tiktok-algorithm-video-investigation-11626877477>.

27 <sup>693</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>.



1 euphemisms or purposefully misspell “suicide” to easily avoid moderation, are likewise widespread.  
2 “Imdone#” has one billion views, while “#suwerslide” has two million.<sup>694</sup>

3 576. ByteDance’s choices about how to design and structure its app—including choosing  
4 not to implement effective age-gating and parental controls, in addition to choosing to design  
5 algorithms to maximize engagement through pushing extreme and outrageous content—go far  
6 beyond benignly organizing the content of others. Instead, they create an environment and  
7 experience suited to ByteDance’s goal of maximizing ad revenues—an environment and experience  
8 that is unreasonably dangerous to the children and teens ByteDance targets.

9 577. In a follow-up experiment by the Wall Street Journal, bots were registered as users  
10 between 13 and 15 years old. One of those bots, programmed to pause on videos referencing drugs,  
11 lingered briefly on “a video of a young woman walking through the woods with a caption” referring  
12 to “stoner girls.” The next day, the algorithm showed the bot a video about a “marijuana-themed  
13 cake.” Then the “majority of the next thousand videos” that TikTok’s algorithm produced “tout[ed]  
14 drugs and drug use,” including marijuana, psychedelics, and prescription drugs.<sup>695</sup>

15 578. The algorithm immersed another bot—registered as a 13-year-old boy—into a rabbit  
16 hole of videos related to bondage and sex, including videos explaining, among other things, “how  
17 to tie knots for sex, recover from violent sex acts and discussing fantasies about rape.”<sup>696</sup> The bot  
18 simply searched for the term “onlyfans”—a site known for hosting adult entertainment—and  
19 watched a handful of videos in the results before returning to the FYP.<sup>697</sup> The algorithm  
20 subsequently bombarded the bot with videos about sex, and, as the bot lingered on those videos, the

21  
22 \_\_\_\_\_  
23 <sup>694</sup> Suicide, Incels and Drugs: How TikTok’s Deadly Algorithm Harms Kids, EKO, March 2023,  
[https://s3.amazonaws.com/s3.sumofus.org/images/eko\\_Tiktok-Report\\_FINAL.pdf](https://s3.amazonaws.com/s3.sumofus.org/images/eko_Tiktok-Report_FINAL.pdf)

24 <sup>695</sup> Rob Barry et al., *How TikTok Serves Up Sex and Drug Videos to Minors*, Wall St. J. (Sept. 8,  
25 2021), <https://www.wsj.com/articles/tiktok-algorithm-sex-drugs-minors-11631052944>.

26 <sup>696</sup> Rob Barry et al., *How TikTok Serves Up Sex and Drug Videos to Minors*, Wall St. J. (Sept. 8,  
27 2021), <https://www.wsj.com/articles/tiktok-algorithm-sex-drugs-minors-11631052944>.

28 <sup>697</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>.



1 bot’s feed became almost entirely dominated by sex-related videos. At one point, “more than 90  
2 percent of [the] account’s video feed was about bondage and sex.”<sup>698</sup>

3 579. The Wall Street Journal concluded “that through its powerful algorithms, TikTok can  
4 quickly drive minors—among the biggest users of the app—into endless spools of content about sex  
5 and drugs.”<sup>699</sup> In another follow-up experiment, the Wall Street Journal found that, once TikTok’s  
6 algorithm determined that the bots would rewatch videos related to weight loss, it “speedily began  
7 serving more, until weight-loss and fitness content made up more than half their feeds—even if the  
8 bot never sought it out.”<sup>700</sup> Indeed, TikTok’s algorithm recommended over 32,000 weight-loss  
9 videos over a two-month period, “many promoting fasting, offering tips for quickly burning belly  
10 fat and pushing weight-loss detox programs and participation in extreme weight-loss  
11 competitions.”<sup>701</sup>

12 580. Alyssa Moukheiber, a treatment center dietitian, explained that TikTok’s algorithm  
13 can push children into unhealthy behaviors or trigger a relapse of disordered eating.<sup>702</sup> Indeed,  
14 several teenage girls interviewed by the Wall Street Journal reported developing eating disorders or  
15 relapsing after being influenced by extreme diet videos TikTok promoted to them.<sup>703</sup>

16 \_\_\_\_\_  
17 <sup>698</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>.

18 <sup>699</sup> Rob Barry et al., *How TikTok Serves Up Sex and Drug Videos to Minors*, Wall St. J. (Sept. 8,  
19 2021), <https://www.wsj.com/articles/tiktok-algorithm-sex-drugs-minors-11631052944>.

20 <sup>700</sup> Tawnell D. Hobbs, ‘*The Corpse Bride Diet*’: *How TikTok Inundates Teens With Eating-*  
21 *Disorder Videos*, Wall St. J. (Dec. 17, 2021), <https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848>.

22 <sup>701</sup> Tawnell D. Hobbs, ‘*The Corpse Bride Diet*’: *How TikTok Inundates Teens With Eating-*  
23 *Disorder Videos*, Wall St. J. (Dec. 17, 2021), <https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848>.

24 <sup>702</sup> Tawnell D. Hobbs, ‘*The Corpse Bride Diet*’: *How TikTok Inundates Teens With Eating-*  
25 *Disorder Videos*, Wall St. J. (Dec. 17, 2021), <https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848>.

26 <sup>703</sup> Tawnell D. Hobbs, ‘*The Corpse Bride Diet*’: *How TikTok Inundates Teens With Eating-*  
27 *Disorder Videos*, Wall St. J. (Dec. 17, 2021), <https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848>.  
28

1           581. Their experiences are not unique. Katie Bell, a co-founder of the Healthy Teen  
2 Project, explained that “the majority of her 17 teenage residential patients told her TikTok played a  
3 role in their eating disorders.”<sup>704</sup>

4           582. Others, like Stephanie Zerwas, an Associate Professor of Psychiatry at the University  
5 of North Carolina at Chapel Hill, could not even recount how many of her young patients told her  
6 that “I’ve started falling down this rabbit hole, or I got really into this or that influencer on TikTok,  
7 and then it started to feel like eating-disorder behavior was normal, that everybody was doing  
8 that.”<sup>705</sup>

9           583. In December 2022, the Center for Countering Digital Hate (“CCDH”) conducted a  
10 similar study, creating TikTok accounts with a registered age of 13 in the United States, United  
11 Kingdom, Canada, and Australia.<sup>706</sup> For the first 30 minutes on the app, the accounts paused briefly  
12 on videos about body image and mental health and liked them. “Where researchers identified a  
13 recommended video matching one of the below categories, they viewed the video for 10 seconds  
14 and liked it. For all other videos, researchers would immediately scroll the For You feed to view the  
15 next video recommended by TikTok.”<sup>707</sup> TikTok’s algorithm seized on this information and, within  
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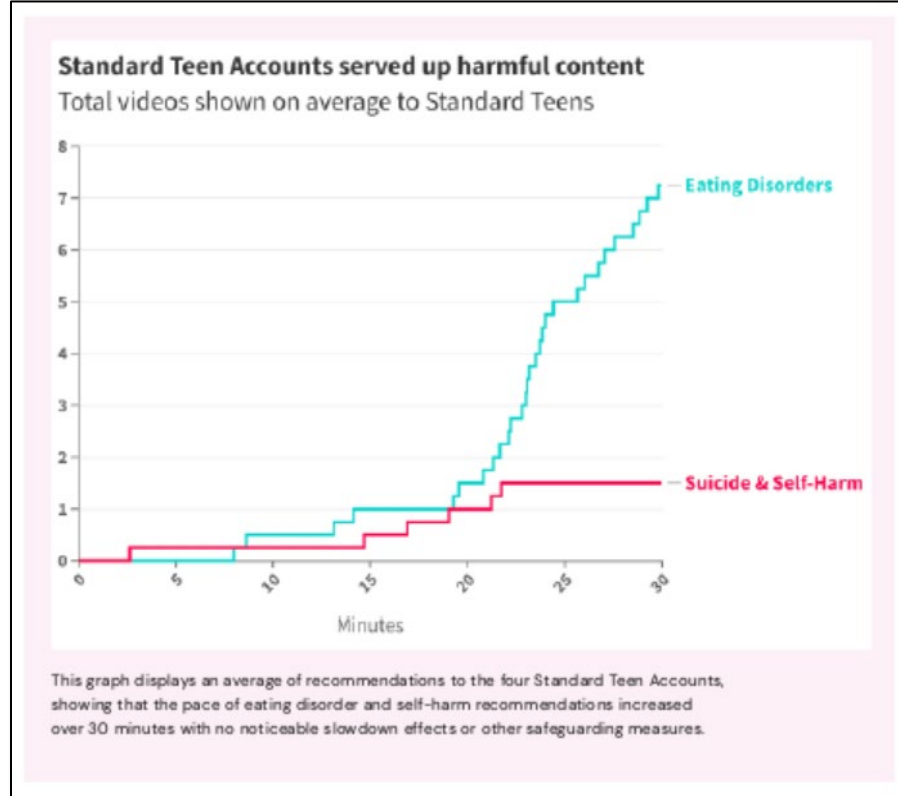
21 <sup>704</sup> Tawnell D. Hobbs, *‘The Corpse Bride Diet’: How TikTok Inundates Teens With Eating-*  
22 *Disorder Videos*, Wall St. J. (Dec. 17, 2021), <https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848>.

23 <sup>705</sup> Tawnell D. Hobbs, *‘The Corpse Bride Diet’: How TikTok Inundates Teens With Eating-*  
24 *Disorder Videos*, Wall St. J. (Dec. 17, 2021), <https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848>.

25 <sup>706</sup> *Deadly by Design*, Center for Countering Digital Hate (Dec. 2022),  
26 [https://counterhate.com/wp-content/uploads/2022/12/CCDH-Deadly-by-Design\\_120922.pdf](https://counterhate.com/wp-content/uploads/2022/12/CCDH-Deadly-by-Design_120922.pdf).

27 <sup>707</sup> Tawnell D. Hobbs, *‘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-inundates-teens-with-eating-disorder-videos-11639754848>.

1 minutes, began recommending content about eating disorders and self-harm.



15 584. The CCDH report further illustrated TikTok’s algorithms at work, noting that, for an  
16 account that “liked” content about body image and mental health, the algorithm recommended  
17 similar content every 39 seconds. As the 30 minutes went on, TikTok recommended more videos  
18 related to eating disorders, suicide, and self-harm, as the graph below shows.

19 585. TikTok’s rabbit holes are particularly problematic for young people, whose  
20 undeveloped frontal lobes lack the executive function and necessary impulse control to stop  
21 watching. The more young users engage by viewing or hesitating on a particular piece of content,  
22 the more TikTok’s algorithms learn about the user. ByteDance uses this feature to exploit the  
23 vulnerabilities of children and teenagers and addict them to its product.

24 586. Indeed, ByteDance admits that its recommendation algorithm creates a “risk of  
25 presenting an increasingly homogeneous stream of videos.”<sup>708</sup> As the above-referenced studies and  
26

27 <sup>708</sup> *How TikTok recommends videos #ForYou*, TikTok (June 18, 2020),  
28 <https://newsroom.tiktok.com/en-us/howtiktok-recommends-videos-for-you>.

1 experiments demonstrate, that homogeneous stream often includes harmful content, including posts  
2 about depression, self-harm, drugs, and extreme diets.

3 587. Rather than preventing children from falling down these harmful rabbit holes,  
4 encountering harmful content, ByteDance threw up its hands, insisting “[i]t is not TikTok’s place to  
5 decide for people what is or is not ‘appropriate’ for them or their teens.”<sup>709</sup>

6 588. This course of conduct resulted in the United Kingdom’s Information  
7 Commissioner’s Office bringing a fine of £12.7 million (\$15.8 million) for breaches of data  
8 protection law, including the misuse of children’s personal data.<sup>710</sup> The fine rested on TikTok’s  
9 failure to obtain authorization from the appropriate responsible adults before processing and using  
10 children’s data, failure to adequately inform users about how the product uses and shares data, and  
11 failure “to ensure that U.K. users’ information was processed lawfully and transparently.”<sup>711</sup>

12 589. ByteDance uses a series of interrelated design features that exploit known mental  
13 processes to induce TikTok’s users to use the product more frequently, for more extended periods,  
14 and with more intensity (i.e., providing more comments and “likes”). ByteDance knows or should  
15 have known that children, whose brains are still developing, are particularly susceptible to these  
16 addictive features.

17 590. TikTok is further defective because ByteDance designed the app so users cannot  
18 disable the auto-play function on the FYP.<sup>712</sup> As noted above, when a user opens the TikTok app or  
19 visits the TikTok website, the product immediately begins playing a video on the user’s FYP. The  
20 user may request more videos with a simple upward swipe, and the product will deliver a seemingly

21 \_\_\_\_\_  
22 <sup>709</sup> TIKTOK3047MDL-001-00060817.

23 <sup>710</sup> Tom Fish, *TikTok Handed £12.7M UK Fine For Misusing Children’s Data*, (Apr 4, 2023, 1:26  
24 PM BST) <https://www.law360.com/articles/1593391/tiktok-handed-12-7m-uk-fine-for-misusing-children-s-data>.

25 <sup>711</sup> Tom Fish, *TikTok Handed £12.7M UK Fine For Misusing Children’s Data*, (Apr 4, 2023, 1:26  
26 PM BST) <https://www.law360.com/articles/1593391/tiktok-handed-12-7m-uk-fine-for-misusing-children-s-data>.

27 <sup>712</sup> *2 Best Ways You Can Turn off TikTok Autoplay*, Globe Calls (Dec. 16, 2022),  
28 <https://globecalls.com/2-best-ways-you-can-turn-off-tiktok-autoplay/>.

1 endless content stream. If a user does not proceed from a video, it continues to play on an endless  
2 loop. The ability to scroll continuously induces a “flow-state” and distorts users’ sense of time.

3 591. The TikTok app interface is designed with only a limited number of buttons and  
4 sections of the app for users to navigate, such that the design does not impede “flow.”

5 592. The FYP also leverages principles of IVR to encourage compulsive usage, in the  
6 same fashion as Instagram Reels. A user swipes to receive the next video, and each swipe offers the  
7 prospect (but not the certainty) of dopamine-releasing stimuli.

8 593. The cumulative effect of these features is addictive, compulsive engagement. As  
9 researchers at the Brown University School of Public Health explained, “the infinite scroll and  
10 variable reward pattern of TikTok likely increase the addictive quality of the app as they may induce  
11 a flow-like state for users that is characterized by a high degree of focus and productivity at the task  
12 at hand.”<sup>713</sup>

13 594. Dr. Julie Albright, a Professor at the University of Southern California, similarly  
14 explained that TikTok is so popular because users will “just be in this pleasurable dopamine state,  
15 carried away. It’s almost hypnotic, you’ll keep watching and watching.” Users “keep scrolling,”  
16 according to Dr. Albright, “because sometimes you see something you like, and sometimes you  
17 don’t. And that differentiation—very similar to a slot machine in Vegas—is key.”<sup>714</sup>

18 595. Aza Raskin, the engineer who designed infinite scroll, described the feature as being  
19 “as if [social media companies are] taking behavioral cocaine and just sprinkling it all over your  
20 interface, and that’s the thing that keeps you coming back and back and back.” Because the infinite  
21 scroll does not “give your brain time to catch up with your impulses . . . you just keep scrolling.”<sup>715</sup>

22 \_\_\_\_\_  
23 <sup>713</sup> Sophia Petrillo, *What Makes TikTok So Addictive? An Analysis of the Mechanisms Underlying*  
24 *the World’s Latest Social Media Craze*, Brown Undergraduate J. of Pub. Health (Dec. 13, 2021),  
<https://sites.brown.edu/publichealthjournal/2021/12/13/tiktok/>.

25 <sup>714</sup> John Koetsier, *Digital Crack Cocaine: The Science Behind TikTok’s Success*, Forbes (Jan. 18,  
26 2020), <https://www.forbes.com/sites/johnkoetsier/2020/01/18/digital-crack-cocaine-the-science-behind-tiktoks-success/?sh=765d1b4178be>.

27 <sup>715</sup> John Koetsier, *Digital Crack Cocaine: The Science Behind TikTok’s Success*, Forbes (Jan. 18,  
28 2020), <https://www.forbes.com/sites/johnkoetsier/2020/01/18/digital-crack-cocaine-the-science-behind-tiktoks-success/?sh=765d1b4178be>.

1           596. To reinforce this addictive experience, ByteDance intentionally omits the concept of  
2 time from their product, stripping information such as when a user uploaded a video from its endless  
3 stream of content. In the FYP, there is no way to discern how long ago the video was posted, or  
4 when the user who posted the video joined TikTok.

5           597. On at least some phones, TikTok is designed to cover the clock displayed at the top  
6 of user's iPhones, preventing them from keeping track of the time spent on TikTok.<sup>716</sup>

7           598. ByteDance has designed the app so that users can see, however, how many times a  
8 video was "liked," commented on, or shared. So the only thing users can quantify within the app is  
9 the approval or disapproval of others.

10          599. In June 2022, after receiving public criticism regarding its product's effects on  
11 people's mental health, ByteDance introduced various tools to purportedly encourage users to take  
12 a break from infinite scrolling, such as a "Take a Break" reminder and time-limit caps. ByteDance  
13 chose not to activate these tools by default. Even for minors, once they have exceeded 100 minutes  
14 of usage a day, TikTok only "reminds" them that these "Take a Break" tools exist upon opening the  
15 app, but does not automatically activate them by default.

16          600. In March of 2023, TikTok announced additional measures to quell public criticism  
17 about the addictiveness of its product. Once the changes are implemented, minors under age 18 will  
18 by default have their use limited to one hour. There is less to this time limit than meets the eye.  
19 Children whose accounts are paired with parental accounts will need a code from the parent to  
20 extend the time limit. Children with unpaired accounts, however, can easily extend the time limit or  
21 even disable it themselves.

22          601. In addition to the defective infinite scroll, ByteDance has designed TikTok so it has  
23 other design features that exploit social psychological impulses to induce children to use TikTok  
24 daily and for extended periods of time, adding to the product's addictive nature.

25  
26 [behind-tiktoks-success/?sh=765d1b4178be](https://www.wired.com/story/tiktok-time/).

27 <sup>716</sup> Louise Matsakis, *On TikTok, There is No Time*, Wired (October 3, 2019),  
28 <https://www.wired.com/story/tiktok-time/>.

1           602. Several TikTok features actively encourage users to generate ephemeral photos and  
2 videos. This defect promotes compulsive use, because users risk missing the content posted by their  
3 friends and others if they do not check TikTok at least daily.

4           603. A TikTok user can, for example, post expiring “Stories,” short videos that disappear  
5 after 24 hours. These videos do not otherwise appear in a user’s feed. TikTok’s live stream feature  
6 is similar.<sup>717</sup>

7           604. A relatively new feature, “TikTok Now,” pushes daily notifications to users to share  
8 “authentic, real-time images or 10-second videos at the same time as your friends.”<sup>718</sup> ByteDance  
9 designed this feature so that once a user gets the notification, the user has three minutes to post an  
10 image or video. That user cannot view friends’ “TikTok Now” posts without sharing one of their  
11 own, and posts submitted outside of the three-minute window are marked as “late.” TikTok  
12 preserves a user’s history in a calendar view, adding to the pressure to visit the app daily and when  
13 notified by TikTok to do so. ByteDance designed these defective features to increase responsiveness  
14 to notifications and keep young users locked into the product, as they do not want to miss out on  
15 this perceived social activity.

16           605. Like “Snap Streaks,” “TikTok Now” does not enhance the communication function  
17 of the product, but simply exploits young users’ susceptibility to persuasive design, teenage social  
18 anxiety, and FOMO. ByteDance’s insidious design of “TikTok Now” also employs point scoring  
19 and competition with others to drive frequent and continuous engagement by children, who  
20 otherwise risk checking in late and alienating other peers participating in the exchange.

21           606. Like the other Defendants’ apps, ByteDance designed TikTok to leverage the  
22 principle of IVR by encouraging users to “like,” share, or reshare videos that others have created or  
23 posted. Receiving a “Like” or “Reshare” indicates that others approve of a user’s content, and  
24 satisfies the user’s natural, developmentally predictable desire for acceptance. As discussed above,

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26 <sup>717</sup> Hilary Anderson, *Social media apps are ‘deliberately addictive to users*, BBC (July 4, 2018),  
<https://www.bbc.com/news/technology-44640959>.

27 <sup>718</sup> *TikTok Now*, TikTok, [https://www.tiktok.com/creators/creator-portal/product-feature-](https://www.tiktok.com/creators/creator-portal/product-feature-updates/tiktok-now)  
28 [updates/tiktok-now](https://www.tiktok.com/creators/creator-portal/product-feature-updates/tiktok-now).



1 “Likes” activate the reward region of the brain and release dopamine to create a positive feedback  
2 loop.<sup>719</sup> Users return to TikTok again and again, hoping for yet another pleasurable experience.<sup>720</sup>

3 607. ByteDance also designed TikTok to use reciprocity to manipulate users into using  
4 the app. One example is the “Duet” feature, which allows users to post a video side-by-side with a  
5 video from another TikTok user. Users utilize “Duet” to react to the videos of TikTok content  
6 creators. ByteDance intends the response to engender a reciprocal response from the creator of the  
7 original video, inducing them to return to the app.

8 608. Another “core feature” of TikTok are “challenges,” which are campaigns that compel  
9 users to create and post in TikTok certain types of videos, such as performing a dance routine or a  
10 dangerous prank. By fostering competition and the social rewards of posting a challenge video,  
11 ByteDance incentivizes users to engage with the product continuously.

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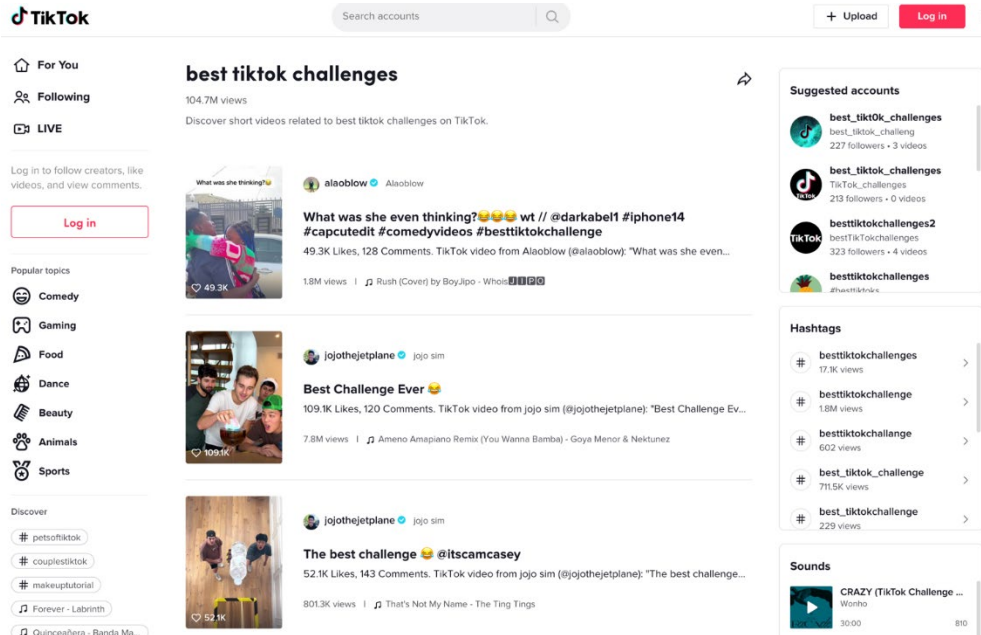
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<sup>719</sup> Rasan Burhan & Jalal Moradzadeh, *Neurotransmitter Dopamine (DA) and its Role in the*  
24 *Development of Social Media Addiction*, 11(7) *J. Neurology & Neurophysiology* 507 (2020),  
25 <https://www.iomcworld.org/open-access/neurotransmitter-dopamine-da-and-its-role-in-the-development-of-social-media-addiction-59222.html>.

26 <sup>720</sup> Rasan Burhan & Jalal Moradzadeh, *Neurotransmitter Dopamine (DA) and its Role in the*  
27 *Development of Social Media Addiction*, 11(7) *J. Neurology & Neurophysiology* 507 (2020),  
28 <https://www.iomcworld.org/open-access/neurotransmitter-dopamine-da-and-its-role-in-the-development-of-social-media-addiction-59222.html>.



1 609. Challenges are incorporated into TikTok’s architecture and user interface. TikTok  
2 actively promotes what it determines to be the “best” challenges to its users.



14 610. Challenge videos have been described as a “cornerstone” of TikTok, and are among  
15 the most popular on the platform. Videos for the #oldtownroadchallenge, which feature users  
16 dancing and lip syncing to Lil’ Nas X’s hit song “Old Town Road,”, have over a billion views.<sup>721</sup>

17 611. ByteDance encourages businesses to create challenges as a form of marketing,  
18 explaining that challenges are “geared towards building awareness and engagement,” and “research  
19 shows that they can deliver strong results” and increased return on ad spending “at every stage of  
20 the funnel.”<sup>722</sup> Chipotle Restaurant’s “GuacDance” challenge, for example, has racked up over one  
21 billion views.

22 612. While ByteDance extolls the revenue potential from challenges, young users face  
23 new and serious harms, as the challenges’ stakes grow more extreme and dangerous, a foreseeable  
24

25 <sup>721</sup> *TikTok Challenges: What They Are and Why They Are Great for Brands*, Sprout Social, (May  
26 4, 2022), <https://sproutsocial.com/insights/tiktok-challenges/>

27 <sup>722</sup> *Branded Hashtag Challenge: Harness the Power of Participation*, TikTok for Business (Mar.  
28 16, 2022), <https://www.tiktok.com/business/en-US/blog/branded-hashtag-challenge-harness-the-power-of-participation>.

1 consequence of TikTok’s engagement-maximization design. Numerous child users have injured or  
2 even killed themselves or others participating in viral pranks to obtain rewards and increase the  
3 number of “likes,” views, and followers.

4           613. One such viral prank, “the Benadryl challenge,” features users filming themselves  
5 taking large quantities of Benadryl to cause hallucinations or induce an altered mental state. Other  
6 similar viral challenges include the “NyQuil Challenge,” in which young people are encouraged to  
7 eat chicken cooked in NyQuil; the “Milk Crate Challenge,” where adolescents climb atop a stack of  
8 milk crates and jump off; and the “Blackout Challenge” where youth are encouraged to make  
9 themselves faint by holding their breath and constricting their chest muscles or restricting airflow  
10 with a ligature around their neck.

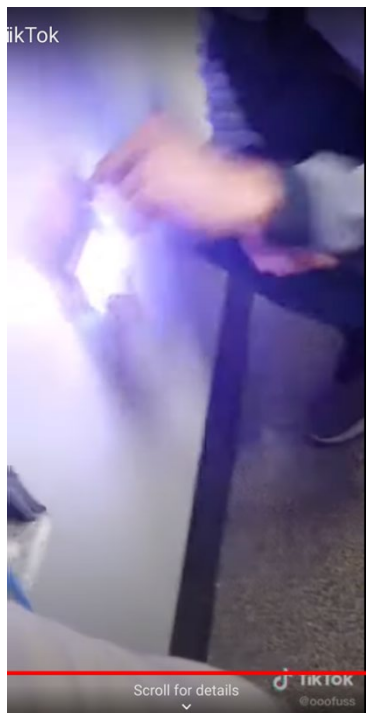
11           614. The prevalence of some of these challenges caused the Food and Drug  
12 Administration to issue a warning about social media encouraging kids to misuse over-the-counter  
13 medications, which can lead to serious harm or even death.<sup>723</sup>

14           615. In the “penny challenge,” also known as the “outlet challenge,” users are encouraged  
15 to slide a penny between a wall outlet and a plugged-in phone charger, creating an electrical arc:  
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27 <sup>723</sup> *A Recipe for Danger: Social Media Challenges Involving Medicine*, FDA, (September 15,  
28 2022), <https://www.fda.gov/consumers/consumer-updates/recipe-danger-social-media-challenges-involving-medicines>.

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616. The prevalence of this challenge prompted Massachusetts fire officials to issue a public warning: touching the metal prongs “can cause sparks, electrical system damage, and fire.”<sup>724</sup>

617. One especially dangerous TikTok challenge showed users how to easily steal Kia and Hyundai cars and encouraged them to upload their own car theft videos. This challenge resulted in 14 reported crashes and eight fatalities.<sup>725</sup>

618. The deadliest “TikTok Challenge” promoted by TikTok’s algorithm is the “TikTok Blackout Challenge,” which encourages users to choke themselves with belts, purse strings, or anything similar until passing out. On January 21, 2021, a 10-year-old girl in Italy died after TikTok’s app and algorithm recommended the Blackout Challenge on her FYP. According to Italian

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<sup>724</sup> *Branded Hashtag Challenge: Harness the Power of Participation*, TikTok for Business (Mar. 16, 2022), <https://www.tiktok.com/business/en-US/blog/branded-hashtag-challenge-harness-the-power-of-participation>.

<sup>725</sup> *Hyundai and Kia Launch Service Campaign to Prevent Theft of Millions of Vehicles Targeted by Social Media Challenge*, National Highway Traffic Safety Administration, (February 14, 2023), <https://www.nhtsa.gov/press-releases/hyundai-kia-campaign-prevent-vehicle-theft>.

1 news reports, after the young girl saw the Blackout Challenge on the TikTok app, she tied a belt  
2 around her neck and choked herself, causing her to go into cardiac arrest. She was rushed to the  
3 hospital but was declared braindead upon arrival and ultimately died.

4 619. On March 22, 2021, a 12-year-old boy, Joshua Haileyesus, died after attempting the  
5 Blackout Challenge that TikTok's app and algorithm recommended to him through his FYP. Joshua  
6 was discovered breathless and unconscious by his twin brother and ultimately died after 19 days on  
7 life support. Joshua attempted the Blackout Challenge by choking himself with a shoelace.

8 620. On June 14, 2021, a 14-year-old boy died in Australia while attempting to take part  
9 in TikTok's Blackout Challenge after TikTok's app and algorithm presented the deadly challenge  
10 to him through his FYP.

11 621. In July 2021, a 12-year-old boy died in Oklahoma while attempting the Blackout  
12 Challenge after TikTok's app and algorithm recommended the dangerous and deadly video to him  
13 through his FYP.

14 622. In December 2021, a 10-year-old girl, Nyla Anderson, died in Pennsylvania after  
15 attempting the Blackout Challenge that TikTok's algorithm recommended to her through her FYP.  
16 Nyla attempted the Blackout Challenge by using a purse strap.

17 623. In all, the TikTok Blackout Challenge has led to the death of at least 12 children in  
18 the United States alone.<sup>726</sup>

19 624. A study of adolescents and young adults who participated in dangerous challenges  
20 found that "engaging in online challenges to gain likes and views was reported as highly important"  
21 to the participants. Study participants claimed to have received from sixty to two million views of  
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23 <sup>726</sup> Quinn Nguyen, *Don't let your kids try these 9 dangerous TikTok trends!*  
24 [https://cyberpurify.com/knowledge/9-dangerous-tiktok-](https://cyberpurify.com/knowledge/9-dangerous-tiktok-trends/)  
25 [trends/https://cyberpurify.com/knowledge/9-dangerous-tiktok-trends/](https://cyberpurify.com/knowledge/9-dangerous-tiktok-trends/); Olivia Carville, *TikTok's*  
26 *Viral Challenges Keep Luring Young Kids to Their Deaths, Bloomberg* (Nov. 30, 2022)  
27 [https://www.bloomberg.com/news/features/2022-11-30/is-tiktok-responsible-if-kids-die-doing-](https://www.bloomberg.com/news/features/2022-11-30/is-tiktok-responsible-if-kids-die-doing-dangerous-viral-challenges)  
28 [dangerous-viral-challengeshttps://www.bloomberg.com/news/features/2022-11-30/is-tiktok-](https://www.bloomberg.com/news/features/2022-11-30/is-tiktok-responsible-if-kids-die-doing-dangerous-viral-challenges)  
[responsible-if-kids-die-doing-dangerous-viral-challenges.](https://www.bloomberg.com/news/features/2022-11-30/is-tiktok-responsible-if-kids-die-doing-dangerous-viral-challenges)

1 their challenge videos. Perhaps not surprisingly given the study involved adolescents, these children  
2 did not seriously contemplate the possible outcomes from their stunts: “Our participants overlooked  
3 or were unaware of the short-term and long-term risks associated with the challenges.” Moreover,  
4 “participants also frequently encouraged others to perform the same or similar challenges in their  
5 posts, thus potentially contributing to social media through propagating the challenge.”<sup>727</sup> In fact,  
6 ByteDance intentionally promotes these challenges due to their popularity.<sup>728</sup>

7 625. This is not news to ByteDance. Its own internal product research has found that the  
8 number one most identified reason for teen participation in challenges is “[g]etting  
9 views/likes/comments,” followed by “[i]mpressing others online.” ByteDance therefore knows, or  
10 in the exercise of reasonable care should know, that young users’ quest for social acceptance will  
11 cause them to participate in dangerous online challenges to get “likes” or impress their peers. It is  
12 also foreseeable that the challenge architecture on TikTok will be used by young users to promote  
13 dangerous, deadly, and destructive challenges that ByteDance may not initially know about or  
14 actively promote.

15 626. These deaths are the result of design choices made by ByteDance in the TikTok  
16 product, including but not limited to (1) failure to verify of age and identity of users, which allowed  
17 children as young as 8 or 9 to see these dangerous challenges; (2) defaulting the youngest users into  
18 public accounts, where some post dangerous stunts to increase their views or “likes”; (3) designing  
19 the TikTok algorithm to push this material to young children without regard to safety; and (4) failing  
20 to include warnings to children or their parents that many of the challenges your users see on TikTok  
21 are dangerous and potentially fatal.

22 **d. ByteDance’s defective features inflict impossible image**  
23 **standards and encourage negative appearance comparison.**

24 627. ByteDance designed TikTok with image-altering filters that harm users. These filters

25 <sup>727</sup> R. Roth, *A Study on Adolescents’ and Young Adults’ TikTok Challenge Participation in TikTok*  
26 *in South India*, Human Factors in Health Care (Dec. 2021).

<https://www.sciencedirect.com/science/article/pii/S2772501422000021>.

27 <sup>728</sup> See TIKTOK3047MDL-001-00000813 (“The algorithm is designed to surface viral content,  
28 regardless of its source.”).

1 allow children to artificially change their appearance, for example, by lightening their skin and eyes,  
2 giving them glowing tan skin, or giving them larger lips or fluttering eyelashes.

3 628. Young people often then compare the filtered images to their real-life appearance,  
4 developing a negative self-image based on unrealistic, artificial images.<sup>729</sup> Many young girls use  
5 image-altering filters every day, harming their mental health. Those filters subconsciously make  
6 girls feel imperfect and ugly, “reduc[ing] their self-compassion and tolerance for their own physical  
7 flaws.”<sup>730</sup>

8 629. So compelling is the desire to resemble more closely the filtered ideal that there are  
9 online tutorials explaining how to recreate certain filters using makeup.

10 630. Children’s idealization of their filtered image is externally reinforced when the  
11 filtered images receive more “likes,” comments, and other interaction. Young people also compare  
12 these interaction “scores” to those of friends and celebrities who use filters, reinforcing the idea that  
13 beauty depends on matching a digital ideal.

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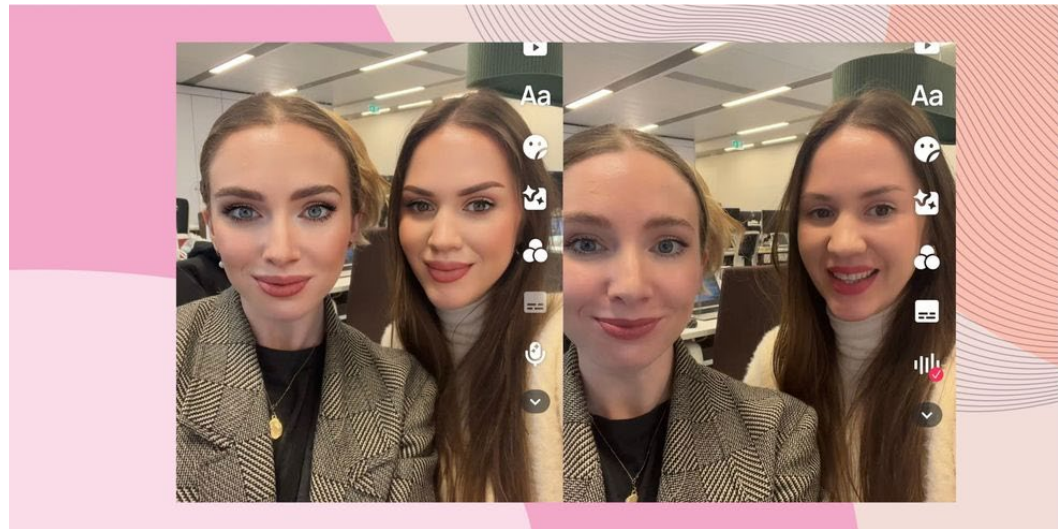
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23 <sup>729</sup> Anna Haines, *From ‘Instagram Face’ To ‘Snapchat Dysmorphia’: How Beauty Filters Are*  
24 *Changing The Way We See Ourselves*, Forbes (Apr. 27, 2021),  
25 [https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-](https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff)  
[dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff](https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff).

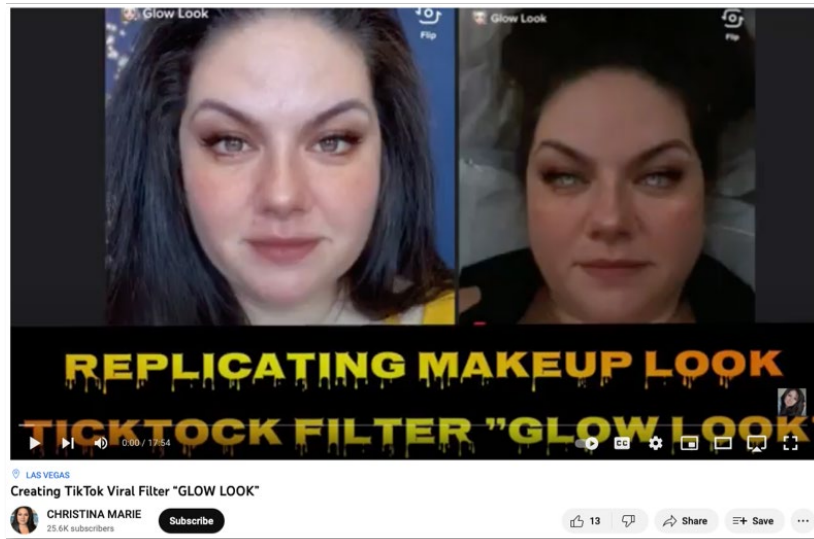
26 <sup>730</sup> Anna Haines, *From ‘Instagram Face’ To ‘Snapchat Dysmorphia’: How Beauty Filters Are*  
27 *Changing The Way We See Ourselves*, Forbes (Apr. 27, 2021),  
28 [https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-](https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff)  
[dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff](https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff).



1           631.    The newest TikTok filter is “Bold Glamour.” The filter uses artificial intelligence to  
2 subtly reshape the user’s face, enlarging the eyes, lifting the cheek bones while thinning the cheeks,  
3 smoothing the skin and plumping the lips. The effect is a highly “idealized” yet realistic version of  
4 the user. Moreover, the filter is difficult to detect since the effect moves with user movements in  
5 real time.



15           632.    “Bold Glamour has the ability to dramatically distort reality and reinforce narrow  
16 and unattainable beauty standards.”<sup>731</sup>



27 <sup>731</sup> *Beauty Brand Dove is Speaking Out Against the Toxic TikTok “Bold Glamour” Filter,*  
28 *Women’s Health* (March 9, 2023), <https://www.today.com/health/bold-glamour-tiktok-filter->

1           633. Many mental health professionals have written that TikTok filters such as “Bold  
2 Glamour” and others exacerbate teen mental health problems as children, particularly girls, strive  
3 for a standard of beauty that is functionally impossible to achieve, with every TikTok filter creating  
4 a test that they are doomed to fail.<sup>732</sup>

5                           **4. ByteDance Materially Contributes to Content on TikTok.**

6           634. A TikTok poster does not create content in a vacuum. ByteDance contributes to  
7 TikTok content in a number of ways such that it is materially responsible in whole or in part for  
8 creation or development of material posted on the platform.

9           635. ByteDance creates images and GIFs for users to use in their TikTok videos to keep  
10 viewers returning to the product. It makes video effects that content creators can incorporate. Some  
11 of the newest visual contributions from TikTok are “stickers.” With this feature, a content creator  
12 can pin stickers to moving objects so that it follows the subject as they move throughout the scene.  
13 ByteDance acknowledges that “the sticker looks as though it’s *part* of the video.”<sup>733</sup> The stickers  
14 even change size relative to the video’s movement.

15           636. In addition to providing some of the visual components of a video, ByteDance often  
16 also provides the sound. ByteDance has “an extensive library” of sounds for creators to add to their  
17 videos. Moreover, ByteDance has licensed a huge music catalog that creators can incorporate into  
18 their videos. In November 2020, TikTok announced a new agreement with Sony Music  
19 Entertainment to make songs available across the TikTok app<sup>734</sup>; in December 2020, TikTok

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22 [mental-health-rcna73044](https://www.today.com/health/bold-glamour-tiktok-filter-mental-health-rcna73044).

23 <sup>732</sup> *Bold Glamour TikTok Filter Can Create Unrealistic Beauty Standards and Harm Mental*  
24 *Health, Experts Say*, Today (March 2, 2023), [https://www.today.com/health/bold-glamour-tiktok-](https://www.today.com/health/bold-glamour-tiktok-filter-mental-health-rcna73044)  
25 [filter-mental-health-rcna73044](https://www.today.com/health/bold-glamour-tiktok-filter-mental-health-rcna73044).

26 <sup>733</sup> [https://www.tiktok.com/creators/creator-portal/en-us/tiktok-creation-essentials/staying-up-to-](https://www.tiktok.com/creators/creator-portal/en-us/tiktok-creation-essentials/staying-up-to-date-with-features/)  
27 [date-with-features/](https://www.tiktok.com/creators/creator-portal/en-us/tiktok-creation-essentials/staying-up-to-date-with-features/). (emphasis in original.)

28 <sup>734</sup> [https://newsroom.tiktok.com/en-us/tiktok-announces-agreement-with-sony-music-](https://newsroom.tiktok.com/en-us/tiktok-announces-agreement-with-sony-music-entertainment)  
[entertainment](https://newsroom.tiktok.com/en-us/tiktok-announces-agreement-with-sony-music-entertainment)



1 announced another such agreement with Warner Music Group, “WMG”<sup>735</sup>; and in February of 2021,  
2 TikTok announced a “global” licensing agreement with Universal Music Group (“(UMG”).<sup>736</sup>

3 637. When a video becomes sufficiently popular, TikTok reaches out to and actively  
4 engages with the poster who, once that threshold is met, is referred to as a “creator.” ByteDance  
5 provides special tools, instructional videos and, critically, recommendations as to content and  
6 structure for the video. For example, a “creator” might be told to break a longer video up into a  
7 series of shorter videos to get additional views. ByteDance might suggest certain music or captions  
8 be added. The “creator” would be encouraged to add certain hashtags that might increase the video’s  
9 visibility on the platform. On information and belief, all TikTok content and associated metadata is  
10 modified to include tracking systems, and every time the content is viewed, tracking codes and other  
11 data are downloaded to the device and information is actively relayed to TikTok’s server.

12 638. TikTok likewise promises some “creators” that it will amplify their content and  
13 promote them based solely on creator status. ByteDance internal documents show that, in addition  
14 letting the algorithm determine what goes viral, the company also hand picks specific videos to  
15 artificially increase their distribution—a practice known internally as “heating.” Overall, 1% to  
16 2% of videos viewed on TikTok have been “heated.” According to media reports, ByteDance uses  
17 “heating” to court influential “creators” or profitable brands to engage with users on TikTok.<sup>737</sup>

18  
19 <sup>735</sup> <https://www.musicbusinessworldwide.com/warner-music-group-inks-licensing-deal-with-tiktok/>; see also <https://hitsdailydouble.com/news&id=324524&title=WARNER-TIKTOK-AGREE-TO-NEW-LICENSING-DEAL>  
20 <https://hitsdailydouble.com/news&id=324524&title=WARNER-TIKTOK-AGREE-TO-NEW-LICENSING-DEAL> (Former WMG executives **Ole Obermann** and **Tracy Gardner** recently joined TikTok to oversee global music development; Gardner now holds the title of Head of Label Licensing & Partnerships at TikTok., while Obermann is TikTok’s Global Head of Music).

24 <sup>736</sup> <https://www.musicbusinessworldwide.com/tiktok-and-universal-music-group-sign-global-licensing-deal/>

26 <sup>737</sup> Enily Baker White, *TikTok’s Secret “Heating” Button Can Make Anyone Go Viral*, Forbes (January 20, 2023), <https://www.forbes.com/sites/emilybaker-white/2023/01/20/tiktoks-secret-heating-button-can-make-anyone-go-viral/>  
27 <https://www.forbes.com/sites/emilybaker-white/2023/01/20/tiktoks-secret-heating-button-can-make-anyone-go-viral/>

1           639. ByteDance has multiple methods of compensating “creators” who, in conjunction  
2 with ByteDance, make content for the platform. These methods include receiving tips and gifts from  
3 viewers, special gifts available during TikTok LIVE presentations, and contributions from TikTok’s  
4 “creator fund.” TikTok obtains PayPal information from “creators” and sends them money daily,  
5 with communications and full-screen notifications urging them to post more and to post on multiple  
6 surfaces of the TikTok product.

7           640. ByteDance’s contribution to the content on TikTok is further recognized in the rights  
8 it asserts to content on the TikTok platform. In its Terms of Service (“Last updated: February 2019”)  
9 TikTok requires that all users license to TikTok an unconditional, irrevocable royalty-free, fully  
10 transferable, perpetual worldwide license to use, modify, adapt, reproduce, publish, transmit all  
11 material submitted by Users onto TikTok. TikTok further requires that all users waive any rights to  
12 inspect or approve their material being used for marketing or promotional materials. Further, they  
13 require that users waive any and all rights of privacy and publicity. TikTok requires that all users  
14 grant TikTok total control over the material that’s published – including the right to cut, crop, and  
15 edit. Through these licensing provisions, TikTok effectively becomes the owner of all content on  
16 the platform.

17                           a.       **ByteDance’s defective features include impediments to**  
18                                       **discontinuing use.**

19           641. Even if a user escapes the addictiveness of TikTok’s design and decides to delete  
20 their account, ByteDance makes doing so a lengthy and complex undertaking. The deletion process  
21 is defectively designed to encourage users to retain their accounts, even if their stated reason for  
22 deletion is that the product is endangering their safety or health.

23           642. When a user selects the “Deactivate or delete account” in the “Account” section of  
24 the TikTok app, the user is presented an option: “Delete or deactivate?” Deactivating an account  
25 will preserve the user’s data, but hide it from the product; deleting, on the other hand, will  
26 permanently delete all data associated with the account.

27           643. However, ByteDance designed TikTok so that deletion is not immediate. The data  
28 and account are preserved for 30 days, during which time the user can reactivate their account.

1           644. If a user selects the “Delete account permanently” option, the user is asked “Why are  
2 you leaving TikTok?” The user must select from the following list: (1) I’m leaving temporarily; (2)  
3 I’m on TikTok too much; (3) Safety or privacy concerns; (4) Too many irrelevant ads; (5) Trouble  
4 getting started; (6) I have multiple accounts; or (7) Another reason.

5           645. If a user selects “I’m on TikTok too much,” ByteDance makes a last-ditch effort to  
6 retain the user by reminding the user that a limit can be set on the user’s watch time on the product.  
7 If a user selects “Safety or privacy concerns,” the user is provided a list of resources to “secure” the  
8 account. If the user selects “[a]nother reason,” a written explanation must be provided. The only  
9 option that does not provide or require further information is “I have multiple accounts.” ByteDance  
10 isn’t worried about users deleting merely one account if they already have multiple others.

11           646. Once a user selects a reason for deletion, the next screen prompts the user to  
12 download their TikTok data.

13           647. Before the user continues the deletion, the product requires the user to check a box  
14 at the bottom of the screen that says, “[b]y continuing, you reviewed your data request and wish to  
15 continue deleting your account.” This contrasts with the process of a user “agreeing” to the Terms  
16 of Service and Privacy Policy during the registration process, which does not require a separate  
17 confirmation.

18           648. Once the user confirms a desire to continue with the deletion process, the product  
19 takes the user to yet another screen, which yet again asks whether the user wants to “delete this  
20 account?” The text also explains that the account will be deactivated for 30 days, during which the  
21 user may reactivate the account, and after 30 days, the account and data associated with it will be  
22 permanently deleted. It goes on to warn that if a user deletes the account, the user will no longer be  
23 able to do many things in the app.

24           649. Once a user again confirms that they want to delete their account, TikTok requires  
25 validation with a 6-digit code sent to the telephone number or email address associated with the  
26 account. Only after the user receives and enters the code may they finally “delete” their account  
27 (after waiting 30 days).

28

1           650. ByteDance’s account deletion process is inadequate for children attempting to escape  
2 its addictive and harmful product. Requiring a child to go through multiple steps, and offering  
3 alternatives, as well as a list of things they are giving up, is designed to convince them to change  
4 their mind. Moreover, requiring the user to maintain a deactivated account for 30 days, rather than  
5 deleting it on demand, increases the chance that an addicted user will relapse and return to the app.

6           651. ByteDance’s intentionally cumbersome and defective deletion process prioritizes the  
7 retention of young users, and ad revenue that they generate, over their well-being.

8           **5. ByteDance failed to adequately warn Plaintiffs about the harms its**  
9           **product causes or to provide instructions regarding safe use.**

10           652. Since TikTok’s inception, ByteDance has failed to adequately warn young users  
11 about the physical and mental health risks its product poses. These risks include, but are not limited  
12 to, product abuse and addiction, sexual exploitation from adult users, dissociative behavior, damage  
13 to body image, social isolation, and a plethora of mental health disorders like body dysmorphia,  
14 eating disorders, anxiety, depression, insomnia, ADD/ADHD exacerbation, suicidal ideation, self-  
15 harm, suicide, and death.

16           653. ByteDance targets young users via advertising and marketing materials distributed  
17 throughout traditional as well as digital media, including other social media products. ByteDance  
18 fails to provide adequate warnings in advertising and marketing campaigns to potential adolescent  
19 consumers of the physical and mental harms associated with using TikTok.

20           654. ByteDance heavily advertises its product on YouTube and Snapchat, where it knows  
21 it can effectively reach younger users. In 2019, for example, 80 percent of TikTok’s advertising  
22 spending was on Snapchat.<sup>738</sup>

23           655. One TikTok ad compiles viral videos featuring people of all ages and sets the video  
24 to the pandemic musical hit “Bored in the House,” by a popular TikTok creator. The 15-second  
25 video, titled “It Starts On TikTok,” notes, “if it’s in culture, it starts on TikTok.”<sup>739</sup> Zhu highlighted

26 <sup>738</sup> *TikTok – Snapchat’s Biggest Advertiser – What’s the Strategy*, Media Radar (Feb. 24, 2020),  
27 <https://mediaradar.com/blog/tiktok-snapchat-advertising-strategy/>.

28 <sup>739</sup> TikTok, *It Starts on TikTok: Bored in the House*, YouTube (Sept. 9, 2020),

1 the importance of the U.S. teen market to TikTok, admitting that, in China, “teenage culture doesn’t  
2 exist” because “teens are super busy in school studying for tests, so they don’t have the time and  
3 luxury to play social media apps.” On the other hand, teen culture in the United States is “a golden  
4 audience.”<sup>740</sup>

5 656. Other advertisements ByteDance places on YouTube promote TikTok as a family-  
6 friendly product. For example, one commercial features parents impersonating their children,  
7 explaining that “parents roasting their kids is the best kind of family bonding.”<sup>741</sup> Another TikTok  
8 ad asks content creators what TikTok means to them. Responses include “family,” “sharing special  
9 moments with my daughter,” and a featured appearance by well-known TikTok creator Addison  
10 Rae, who says TikTok represents “family and fun.”<sup>742</sup>

11 657. ByteDance released another TikTok ad, part of the “It Starts on TikTok” ad  
12 campaign, and scheduled it to release on the linear TV, digital media, digital out-of-home, radio and  
13 TikTok’s own social channels.<sup>743</sup> The tagline for the campaign was “[l]oving all of you and the  
14 things you do. Celebrating you” and featured a series of viral clips of various cheerful scenes  
15 depicting people gathered with friends and family of ages.

16 658. ByteDance is also one of the biggest advertisers on Snapchat. In 2019, ByteDance  
17 accounted for 4.4% of Snapchat’s advertising revenue.<sup>744</sup> ByteDance knows that advertising on  
18

19 <https://www.youtube.com/watch?v=DWZCgkmcIjE>.

20 <sup>740</sup> Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y.  
21 Times (Aug. 9, 2016), [https://www.nytimes.com/2016/08/10/technology/china-homegrown-  
internet-companies-rest-of-the-world.html](https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html).

22 <sup>741</sup> *Family Impressions, Compilation*, TikTok’s Official YouTube Page,  
23 <https://www.youtube.com/watch?v=6EYzm25gW-s>.

24 <sup>742</sup> *TikTok Creators Share Their Thoughts About TikTok*, TikTok’s Official YouTube Page  
25 <https://www.youtube.com/watch?v=KAveGBv7HVM>.

26 <sup>743</sup> Todd Spangler, *TikTok Launches Biggest-Ever Ad Campaign as Its Fate Remains Cloudy*,  
27 Variety (Aug. 10, 2020), [https://variety.com/2020/digital/news/tiktok-advertising-brand-  
campaign-sale-bytedance-1234738607/](https://variety.com/2020/digital/news/tiktok-advertising-brand-campaign-sale-bytedance-1234738607/).

28 <sup>744</sup> Robert Williams, *TikTok is the biggest advertiser on Snapchat, study says*, MarketingDive

1 Snapchat is an effective way to reach a young audience. Snap claims that its Snapchat product  
2 reaches 90% of people aged 13-24 years old, and 75% of 13-34 year olds in the United States.

3 659. Despite its funny, cheerful ads featuring smiling families and funny images, TikTok,  
4 as designed, presents serious risks to young users on the platform, through its distinctive and  
5 manipulative product features, including a lack of adequate age and identity verification tools, as  
6 well as inadequate parental controls.

7 660. ByteDance fails to adequately warn young users of these risks beginning with the  
8 first stages of the product registration process. At account setup, TikTok contains no warning labels,  
9 banners, or conspicuous messaging to adequately inform adolescent users of product risks, potential  
10 dangers, and physical and mental harm associated with usage of the product. Instead, ByteDance  
11 allows underage users to easily create an account (or multiple accounts) and fully access the product.

12 661. ByteDance's lack of appropriate warnings continues once a child has TikTok.  
13 ByteDance does not suitably inform child users that their data will be tracked, used to help build a  
14 unique algorithmic profile, and potentially sold to TikTok's advertising clients.

15 662. Alarmingly, ByteDance also does not adequately warn young users before  
16 facilitating adult connections and interactions that adult predators use its product.

17 663. ByteDance's failure to adequately warn young users about the risks of the product  
18 continues even if they display signs of addiction or habitual and compulsive use. Besides the  
19 disabled by default "Take a Break" reminder, ByteDance does not warn users when their screen  
20 time reaches harmful levels or when young users are accessing the product on a habitual basis.

21 664. Not only does ByteDance fail to adequately warn users about the risks associated  
22 with TikTok, but it also does not provide sufficient instructions on how children can safely use the  
23 product. A reasonable and responsible company would instruct children on best practices and safety  
24 protocols when using a product known to contain danger and health risks.

25  
26  
27 \_\_\_\_\_  
28 (March 16, 2020), <https://www.marketingdive.com/news/tiktok-is-the-biggest-advertiser-on-snapchat-study-says/574164/>.

1           665. ByteDance failed to adequately warn parents about all the foregoing dangers and  
2 harms. ByteDance’s failure to adequately warn and instruct as set forth herein has proximately  
3 caused significant harm to Plaintiffs’ mental and physical well-being, and other injuries and harms  
4 as set forth herein.

5                   **6. ByteDance facilitates the spread of CSAM and child exploitation.**

6           666. ByteDance has designed various TikTok features that promote and dramatically  
7 exacerbate sexual exploitation, the spread of CSAM, sextortion, and other socially maladaptive  
8 behavior that harms children.

9           667. TikTok’s design features enable the spread of this illegal material, and it receives  
10 value in the form of increased user activity for disseminating these materials on the product.

11           668. TikTok allows users to add a location to publicly shared videos of themselves.<sup>745</sup>  
12 TikTok encourages the use of location services, “prompt[ing] [users] to turn on Location Services  
13 when [users] browse the For You feed.”

14           669. By providing access to a child user’s present physical location, ByteDance  
15 encourages predators to locate nearby children for purposes of sexual exploitation, sextortion, and  
16 CSAM.

17           670. ByteDance designed TikTok with a “Your Private Videos,” feature, where users can  
18 create and store private videos that are only visible to the user, better known as “Post-in-Private”  
19 accounts, where adult predators store, create, post, and share CSAM. Within days of following a  
20 small number of “Post-in-Private” accounts, TikTok’s algorithm begins recommending dozens of  
21 other “Post-in-Private” accounts to follow, making it easy for predators to view and share even more  
22 CSAM.<sup>746</sup>

23  
24  
25  
26 <sup>745</sup> *Location Information on TikTok*, TikTok, <https://support.tiktok.com/en/account-and-privacy/account-privacy-settings/location-services-on-tiktok>.

27 <sup>746</sup> *Location Information on TikTok*, TikTok, <https://support.tiktok.com/en/account-and-privacy/account-privacy-settings/location-services-on-tiktok>.  
28

1 671. These accounts are nominally private, but users can share their usernames and  
2 passwords with other users to access these private videos.<sup>747</sup> While ByteDance’s user policy forbids  
3 sharing passwords with other users, TikTok’s design means that it is nonetheless very easy to do.<sup>748</sup>

4 672. ByteDance designed TikTok to offer two-factor authentication but does not require  
5 users to enable it. In fact, when a user creates a new account, the default setting disables the two-  
6 factor authentication.<sup>749</sup>

7 673. Furthermore, TikTok allows more than one device to be simultaneously logged into  
8 a single account, allowing multiple predators to use one “Post-in-Private” account simultaneously.

9 674. ByteDance’s “Post-in-Private” account features also facilitate the grooming of  
10 children and adolescents by adult predators. Adult predators can store CSAM videos in “Your  
11 Private Videos” and then show them to adolescent users as a grooming tool. Should adult predators  
12 convince adolescent users to create CSAM of themselves in the “Post-in-Private” accounts, the  
13 “Your Private Videos” feature makes it easy for the videos to be produced, uploaded, and stored.

14 675. Another defective feature of TikTok is its livestream product, “TikTok LIVE.”  
15 Although ByteDance’s policy restricts access for anyone under eighteen to “TikTok LIVE,”  
16 TikTok’s design, as discussed above, does not incorporate an age verification protocol, so it is easy  
17 for underage users to access this feature.<sup>750</sup>

18 676. Within “TikTok LIVE” is another feature called “LIVE Gifts” for “viewers to react  
19 and show their appreciation for [] LIVE content in real-time.<sup>751</sup> TikTok then awards “Diamonds” to

20 \_\_\_\_\_  
21 <sup>747</sup> Gracelynn Wan, *These TikTok Accounts Are Hiding Child Sexual Abuse Material In Plain*  
22 *Sight*, Forbes (Nov. 14, 2022) <https://www.forbes.com/sites/alexandralevine/2022/11/11/tiktok-private-csam-child-sexual-abuse-material/?sh=749d6cb63ad9>.

23 <sup>748</sup> TikTok Terms of Service, <https://www.tiktok.com/legal/page/us/terms-of-service/en>.

24 <sup>749</sup> *How your email and phone number are used on TikTok*, TikTok,  
25 <https://support.tiktok.com/en/account-and-privacy/personalized-ads-and-data/how-your-phone-number-is-used-on-tiktok>.

26 <sup>750</sup> *What is TikTok LIVE?*, TikTok, <https://support.tiktok.com/en/live-gifts-wallet/tiktok-live/what-is-tiktok-live>.

28 <sup>751</sup> *LIVE Gifts on TikTok*, TikTok, <https://support.tiktok.com/en/live-gifts-wallet/tiktok-live/live->



1 LIVE creators based on the popularity of their content. “One way for creators to collect “Diamonds  
2 is to receive Gifts from viewers on [their] LIVE videos.” Creators awarded “Diamonds” “may obtain  
3 a Reward Payment in money or in virtual items.”<sup>752</sup>

4 677. ByteDance’s design of the “LIVE Gifts” and “Diamonds” rewards greatly increase  
5 the risk of adult predators targeting adolescent users for sexual exploitation, sextortion, and CSAM.  
6 According to Leah Plunket, an assistant dean at Harvard Law School, “TikTok LIVE” is “the digital  
7 equivalent of going down the street to a strip club filled with 15-year-olds.”<sup>753</sup> “Livestreams on  
8 [TikTok] are a popular place for men to lurk and for young girls—enticed by money and gifts—to  
9 perform sexually suggestive acts.”<sup>754</sup>

10 678. Another of TikTok’s defective features enables predators to communicate privately  
11 with youth, with virtually no evidence of what was exchanged. The private messaging or “Direct  
12 messaging” feature allows a user to send a direct private message to another user. Predators use  
13 these messages to identify children willing to respond to a stranger's message and then prey on the  
14 child’s vulnerabilities.

15 679. Although Tiktok’s features enable predators, TikTok does not have any feature to  
16 allow users to specifically report CSAM.<sup>755</sup>

17 680. Users have reported “Post-in-Private” CSAM videos to TikTok, and ByteDance  
18 responded that no violations of its policy were found. One user searched for and contacted multiple

19 \_\_\_\_\_  
20 [gifts-on-tiktok.](#)

21 <sup>752</sup> *LIVE Gifts on TikTok*, TikTok, <https://support.tiktok.com/en/live-gifts-wallet/tiktok-live/live-gifts-on-tiktok>.

22 <sup>753</sup> Alexandra Levine, *How TikTok Live Became a Strip Club Filled with 15 Year Olds*, Forbes  
23 (Apr. 27, 2022), <https://www.forbes.com/sites/alexandralevine/2022/04/27/how-tiktok-live-became-a-strip-club-filled-with-15-year-olds/?sh=5d6cf08d62d7>.

24 <sup>754</sup> Alexandra S. Levine, *How TikTok LIVE Became ‘A Strip Club Filled with 15-Year Olds,’*  
25 Forbes, <https://www.forbes.com/sites/alexandralevine/2022/04/27/how-tiktok-live-became-a-strip-club-filled-with-15-year-olds/?sh=64c0447362d7>.

26 <sup>755</sup> Canadian Centre for Child Protection, *Reviewing Child Sexual Abuse Material Reporting*  
27 *Functions on Popular Platforms*,  
28 [https://protectchildren.ca/pdfs/C3P\\_ReviewingCSAMMaterialReporting\\_en.pdf](https://protectchildren.ca/pdfs/C3P_ReviewingCSAMMaterialReporting_en.pdf).

1 TikTok employees to sound the alarm that CSAM was being created and shared within TikTok’s  
2 “Post-in-Private” accounts. This user did not receive a single response to her concerns.<sup>756</sup>

3 681. ByteDance nonetheless continues to make false representations that they will “take  
4 immediate action to remove content, terminate accounts, and report cases to NCMEC and law  
5 enforcement as appropriate.”<sup>757</sup>

6 682. ByteDance gains revenue for every daily user on TikTok in North America. Each  
7 user and their data are worth income, and ByteDance continues to benefit financially from predators  
8 who commit sexual abuse against children and/or share CSAM using ByteDance’s product.

9 **7. Bytedance Knows That TikTok Harms Many Young Users.**

10 683. ByteDance has a Trust and Safety division charged with identifying defects in the  
11 TikTok product that are injurious to young users, monitoring malign and exploitative videos sent to  
12 young users, and recording, analyzing, and tabulating the mental and physical injuries young users  
13 sustain through their use of the TikTok platform.

14 684. TikTok Trust and Safety division personnel have engaged in thousands of  
15 communications through Lark discussing safety and health concerns arising from young users’  
16 addictive use of the TikTok platform; algorithmic defects that direct TikTok users to malign videos  
17 promoting depression, suicidality, eating disorders and negative body image; dangerous and deadly  
18 TikTok challenges; sexual exploitation of minor users; and the exchange of CSAM on TikTok.  
19 These concerns have been shared throughout the highest levels of TikTok Inc. and with engineers  
20 at Bytedance, Ltd. who designed the TikTok product.

21 685. Since at least 2020, ByteDance senior managers have known that TikTok’s algorithm  
22 directs suicide-promoting videos to young users, but have failed to implement readily available  
23 design changes to protect vulnerable youth from receiving such deadly content.

24  
25 <sup>756</sup> Gracelynn Wan, *These TikTok Accounts Are Hiding Child Sexual Abuse Material In Plain*  
26 *Sight*, Forbes (Nov. 14, 2022), <https://www.forbes.com/sites/alexandralevine/2022/11/11/tiktok-private-csam-child-sexual-abuse-material/?sh=290dbfa63ad9>

27 <sup>757</sup> *Protecting Against Exploitative Content*, TikTok, [https://newsroom.tiktok.com/en-](https://newsroom.tiktok.com/en-us/protecting-against-exploitative-content)  
28 [us/protecting-against-exploitative-content](https://newsroom.tiktok.com/en-us/protecting-against-exploitative-content).

1           **E.       FACTUAL ALLEGATIONS AS TO GOOGLE**

2           686.   Eric Schmidt, the former CEO of Google and more recently, Alphabet, YouTube’s  
3 corporate parent, recently acknowledged the powerful, and purposeful, addictive effect of social  
4 media. Social media products are about “maximizing revenue,” Mr. Schmidt said, and the best way  
5 to maximize revenue is to “maximize engagement.” As Mr. Schmidt continued, in pursuit of their  
6 goal of maximizing engagement to increase revenues, social media products “play[] into the  
7 addiction capabilities of every human.”<sup>758</sup>

8           687.   Google’s YouTube product is no exception. It includes specific, carefully calibrated  
9 features that are known to exploit the mental processes of its users to keep them engaged for as long,  
10 as frequently, and as intensely as possible. Google knows that children and teenagers who flock in  
11 droves to its YouTube product are particularly susceptible to these features. The impact of  
12 YouTube’s addictive power on American youth has been devastating.

13                       **1.       Background and overview of YouTube.**

14           688.   YouTube is a social media product that allows users to post and consume countless  
15 hours of video content about virtually any topic imaginable. YouTube is available without any age  
16 verification feature or adequate parental controls, and comes pre-installed in many Smart-TVs,  
17 mobile devices, various digital media players like Roku, and video game consoles like PlayStation,  
18 Wii, Xbox and Nintendo.

19           689.   YouTube allows users to search for specific video content. It also employs a powerful  
20 algorithm that exploits detailed user information to target each individual user with hours upon hours  
21 of videos recommended by YouTube.

22           690.   A group of design experts and computer scientists created YouTube and launched  
23 the product for public use in December 2005.

24           691.   Technology behemoth Google quickly recognized YouTube’s huge profit potential.  
25 In 2006, just a year after YouTube’s launch, Google acquired YouTube for more than \$1.65 billion

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28 <sup>758</sup> Issie Lapowsky, *Eric Schmidt: Social Media Companies ‘Maximize Outrage’ for Revenue*,  
Protocol (Jan. 6, 2022), <https://www.protocol.com/bulletins/eric-schmidt-youtube-criticism>.

1 in Google stock. At the time, Google’s acquisition of YouTube was one of the largest-ever tech  
2 acquisitions.

3 692. YouTube primarily generates revenue by selling advertising. The more people who  
4 use YouTube and spend time on the site, the more ads YouTube can sell.<sup>759</sup> The ads are then  
5 embedded or placed within the endless stream of videos recommended to the user by YouTube’s  
6 algorithm.

7 693. By 2012, YouTube users were watching close to four billion hours of video every  
8 month. Yet, the average YouTube user spent just fifteen minutes daily engaged with the product.<sup>760</sup>  
9 Users “were coming to YouTube when they knew what they were coming to look for.”<sup>761</sup> They  
10 employed the product to identify and watch certain video content, and then they were done.

11 694. To drive greater revenue, “YouTube . . . set a company-wide objective to reach one  
12 billion hours of viewing a day[.]”<sup>762</sup>

13 695. As Susan Wojcicki, YouTube’s CEO explained, the goal of a “billion hours of daily  
14 watch time gave our tech people a North Star.”<sup>763</sup>

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16  
17  
18 <sup>759</sup> Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*,  
19 Bloomberg (Apr. 2, 2019), <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant>.

20  
21 <sup>760</sup> John Seabrook, *Streaming Dreams: YouTube Turns Pro*, New Yorker (Jan. 16, 2012),  
<https://www.newyorker.com/magazine/2012/01/16/streaming-dreams>.

22 <sup>761</sup> Casey Newton, *How YouTube Perfected the Feed*, Verge (Aug. 30, 2017),  
23 <https://www.theverge.com/2017/8/30/16222850/youtube-google-brain-algorithm-video-recommendation-personalized-feed>.

24  
25 <sup>762</sup> Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*,  
26 Bloomberg (Apr. 2, 2019), <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant>.

27 <sup>763</sup> Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*,  
28 Bloomberg (Apr. 2, 2019), <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant>.

1 696. Google decided that “the best way to keep eyes on the site” was to introduce a feature  
2 that would “[recommend] videos, [that were playing] or after one was finished.”<sup>764</sup>

3 697. That new product feature uses a recommendation algorithm to identify and push  
4 additional videos to users, which YouTube plays automatically through a feature called “autoplay.”  
5 Autoplay begins the next video as soon as the previous videos ends, creating a constant stream of  
6 content.

7 698. Google’s design changes worked. Today, YouTube “has over 2 billion monthly  
8 logged-in users.”<sup>765</sup> And that 2 billion figure does not capture all product usage because YouTube,  
9 by design, allows users to consume videos without logging in or registering an account.

10 **2. Google intentionally encourages youth to use YouTube and then**  
11 **leverages that use to increase revenue.**

12 699. Google knows that children and teenagers use YouTube in greater proportions than  
13 older demographics. YouTube now ranks as the world’s most popular social media product for  
14 minors. According to one recent report, more than 95% of children ages 13-17 have used  
15 YouTube.<sup>766</sup> Nearly 20% of U.S. teens use YouTube “almost constantly.”<sup>767</sup> Among U.S. teenagers  
16 who regularly use social media, 32% “wouldn’t want to live without” YouTube.<sup>768</sup>

17 \_\_\_\_\_  
18 <sup>764</sup> Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*,  
19 Bloomberg (Apr. 2, 2019), <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant>.

20 <sup>765</sup> *The Most Surprising Youtube Channel Statistics and Trends in 2023*, Gitnux Blog (March 24,  
21 2023), <https://blog.gitnux.com/youtube-channel-statistics/>.

22 <sup>766</sup> Emily Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,  
23 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022>.

24 <sup>767</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>.

26 <sup>768</sup> Victoria Rideout et al., *Common Sense Census: Media Use by Tweens and Teens, 2021* at 31,  
27 Common Sense Media (2022),  
28 [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).

1           700. Rather than ensuring minors are not inappropriately or excessively using YouTube,  
2 Google has sought to dominate their attention.

3           701. YouTube’s age controls are defective (or non-existent, since registration is not  
4 required). In addition, Google has developed and marketed a version of YouTube, YouTube Kids,  
5 explicitly targeted at children under 13. Google developed this product to encourage early—and  
6 therefore lasting—adoption of YouTube by children.

7           702. Google knows that a robust and committed base of young users is key to maximizing  
8 advertising revenue. Indeed, it has aggressively touted its hold on child users to advertisers.

9           703. In 2014, for example, Google pitched its YouTube product to Hasbro, a popular toy  
10 manufacturer, and specifically boasted of the product’s immense popularity among children, noting  
11 that it was “unanimously voted as the favorite website of kids 2-12” and that “93% of tweens” use  
12 the product.<sup>769</sup>

13           704. In 2015, Google gave a similar presentation to toy manufacturer Mattel, the maker  
14 of Barbie and other popular kids’ toys, highlighting children’s widespread use of YouTube to  
15 persuade Mattel to display digital ads on the site.<sup>770</sup>

16           705. The FTC has aptly summarized Google’s pitch to advertisers concerning the value  
17 of its youth user base.<sup>771</sup> For example, Google boasted that YouTube “is today’s leader in reaching  
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21 <sup>769</sup> Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief, *FTC v.*  
22 *Google LLC et al.*, No. 1:19-cv-02642-BAH, at 6 (D.D.C. Sept. 4, 2019) Dkt. #1-1.  
[https://www.ftc.gov/system/files/documents/cases/youtube\\_complaint\\_exhibits.pdf](https://www.ftc.gov/system/files/documents/cases/youtube_complaint_exhibits.pdf)

23 <sup>770</sup> Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief, *FTC v.*  
24 *Google LLC et al.*, No. 1:19-cv-02642-BAH, at 3 (D.D.C. Sept. 4, 2019) Dkt. #1-1.  
[https://www.ftc.gov/system/files/documents/cases/youtube\\_complaint\\_exhibits.pdf](https://www.ftc.gov/system/files/documents/cases/youtube_complaint_exhibits.pdf)

25 <sup>771</sup> *Google and YouTube Will Pay Record \$170 Million for Alleged Violations of Children’s*  
26 *Privacy Law*, FTC (Sept. 4, 2019), [https://www.ftc.gov/news-events/news/press-](https://www.ftc.gov/news-events/news/press-releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law)  
27 [releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-](https://www.ftc.gov/news-events/news/press-releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law)  
28 [privacy-law](https://www.ftc.gov/news-events/news/press-releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law). (“YouTube touted its popularity with children to prospective corporate clients”, said  
FTC Chairman Joe Simons.)

1 children aged 6-11;” “the new ‘Saturday Morning Cartoons’;” “and the #1 website regularly visited  
2 by kids.”<sup>772</sup>

3 706. Many of YouTube’s most-viewed videos are kid-focused, and the most subscribed  
4 and highest paid YouTubers are children. With over 12 billion views, “Baby Shark Dance,” a video  
5 aimed at toddlers, is the most viewed video in the history of YouTube – and it and five other child-  
6 focused videos make up the top ten YouTube videos of all time.<sup>773</sup> Child creators also dominate top-  
7 earner lists year after year. Ryan Kaji of Ryan’s World (f/k/a Ryan ToysReview), a channel featuring  
8 now 12-year-old Ryan Kaji unboxing children’s toys, has been among YouTube’s Top 10 most-  
9 subscribed channels in the United States since 2016.<sup>774</sup> Ryan started Ryan’s World in 2015 when  
10 he was only 3. By 2017, his videos had over 8 billion views, and by 2018, he was the highest-earning  
11 YouTuber in the world.<sup>775</sup>

12 707. As with other defendants, once Google lures children in, it then mines them (and all  
13 other users) for a breathtaking amount of data. Google’s current privacy policy, which includes the  
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16 <sup>772</sup> Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief, *FTC v.*  
17 *Google LLC et al.*, No. 1:19-cv-02642-BAH, at 3,12, and 6-7 (D.D.C. Sept. 4, 2019) Dkt. #1-1.  
18 [https://www.ftc.gov/system/files/documents/cases/youtube\\_complaint\\_exhibits.pdf](https://www.ftc.gov/system/files/documents/cases/youtube_complaint_exhibits.pdf).

19 <sup>773</sup> Most Viewed Videos of All Time • (Over 700M views) - YouTube.  
20 [https://www.youtube.com/playlist?list=PLirAqAtl\\_h2r5g8xGajEwdXd3x1sZh8hC](https://www.youtube.com/playlist?list=PLirAqAtl_h2r5g8xGajEwdXd3x1sZh8hC).

21 <sup>774</sup> Madeline Berg, *The Highest-Paid YouTube Stars of 2019: The Kids Are Killing It*, *Forbes* (Dec.  
22 18, 2019), [https://www.forbes.com/sites/maddieberg/2019/12/18/the-highest-paid-youtube-stars-](https://www.forbes.com/sites/maddieberg/2019/12/18/the-highest-paid-youtube-stars-of-2019-the-kids-are-killing-it/?sh=4c3df9a438cd)  
23 [of-2019-the-kids-are-killing-it/?sh=4c3df9a438cd](https://www.forbes.com/sites/maddieberg/2019/12/18/the-highest-paid-youtube-stars-of-2019-the-kids-are-killing-it/?sh=4c3df9a438cd); Madeline Berg, *The Highest-Paid YouTube*  
24 *Stars 2017: Gamer DanTDM Takes The Crown With \$16.5 Million*, *Forbes* (Dec. 7, 2017),  
25 [https://www.forbes.com/sites/maddieberg/2017/12/07/the-highest-paid-youtube-stars-2017-gamer-](https://www.forbes.com/sites/maddieberg/2017/12/07/the-highest-paid-youtube-stars-2017-gamer-dantdm-takes-the-crown-with-16-5-million/?sh=72de79413979)  
26 [dantdm-takes-the-crown-with-16-5-million/?sh=72de79413979](https://www.forbes.com/sites/maddieberg/2017/12/07/the-highest-paid-youtube-stars-2017-gamer-dantdm-takes-the-crown-with-16-5-million/?sh=72de79413979).

27 <sup>775</sup> [https://www.forbes.com/sites/maddieberg/2017/12/07/the-highest-paid-youtube-stars-2017-](https://www.forbes.com/sites/maddieberg/2017/12/07/the-highest-paid-youtube-stars-2017-gamer-dantdm-takes-the-crown-with-16-5-million/?sh=72de79413979)  
28 [gamer-dantdm-takes-the-crown-with-16-5-million/?sh=72de79413979](https://www.forbes.com/sites/maddieberg/2017/12/07/the-highest-paid-youtube-stars-2017-gamer-dantdm-takes-the-crown-with-16-5-million/?sh=72de79413979) *Gamer DanTDM Takes*  
29 *The Crown With \$16.5 Million*, *Forbes* (Dec. 7, 2017),  
30 [https://www.forbes.com/sites/maddieberg/2017/12/07/the-highest-paid-youtube-stars-2017-gamer-](https://www.forbes.com/sites/maddieberg/2017/12/07/the-highest-paid-youtube-stars-2017-gamer-dantdm-takes-the-crown-with-16-5-million/?sh=72de79413979)  
31 [dantdm-takes-the-crown-with-16-5-million/?sh=72de79413979](https://www.forbes.com/sites/maddieberg/2017/12/07/the-highest-paid-youtube-stars-2017-gamer-dantdm-takes-the-crown-with-16-5-million/?sh=72de79413979); Natalie Robehmed & Madeline  
32 Berg, *Highest-Paid YouTube Stars 2018: Markiplier, Jake Paul, PewDiePie And More*, *Forbes*  
33 (Dec. 3, 2018), [https://www.forbes.com/sites/natalierobehmed/2018/12/03/highest-paid-youtube-](https://www.forbes.com/sites/natalierobehmed/2018/12/03/highest-paid-youtube-stars-2018-markiplier-jake-paul-pewdiepie-and-more/?sh=7d909c3f909a)  
34 [stars-2018-markiplier-jake-paul-pewdiepie-and-more/?sh=7d909c3f909a](https://www.forbes.com/sites/natalierobehmed/2018/12/03/highest-paid-youtube-stars-2018-markiplier-jake-paul-pewdiepie-and-more/?sh=7d909c3f909a).



1 YouTube product’s data collection, reveals how sweeping this data collection is. It states that

2 Google tracks:

- 3 a. “information about the apps, browsers, and devices you use  
4 to access Google services . . . includ[ing] unique identifiers,  
5 browser type and settings, device type and settings, operating  
6 system, mobile network information including carrier name  
7 and phone number, and application version number. We also  
8 collect information about the interaction of your apps,  
9 browsers, and devices with our services, including IP  
10 address, crash reports, system activity, and the date, time,  
11 and referrer URL of your request.”
- 12 b. “your activity in our services . . . includ[ing] Terms you  
13 search for[;] Videos you watch[;] Views and interactions  
14 with content and ads[;] Voice and audio information[;]  
15 Purchase activity[;] People with whom you communicate or  
16 share content[;] Activity on third-party sites and apps that  
17 use our services[;] and Chrome browsing history you’ve  
18 synced with your Google Account.”
- 19 c. “Your location information [including] GPS and other sensor  
20 data from your device[;] IP address[;] Activity on Google  
21 services, such as your searches and places you label like  
22 home or work[;] [and] Information about things near your  
23 device, such as Wi-Fi access points, cell towers, and  
24 Bluetooth-enabled devices;”<sup>776</sup>

25 708. Google’s privacy policy also indicates that, like other Defendants, it purchases data  
26 about its users from data brokers, which it euphemistically refers to as “trusted partners” or  
27 “marketing partners.”<sup>777</sup>

28 709. As with other Defendants, YouTube’s collection and analysis of user data allows it  
to assemble virtual dossiers on its users, covering hundreds if not thousands of user-specific data  
segments. This, in turn, allows advertisers to micro-target marketing and advertising dollars to very  
specific categories of users, who can be segregated into pools or lists using YouTube’s data  
segments. Advertisers purchase ad real estate space on users’ feeds, which allow them to place the  
right ads in front of these micro-targeted segments of users--including children, both in the main  
YouTube frame and in the YouTube Kids product. Only a fraction of these data segments come

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27 <sup>776</sup> Information Google Collects. <https://policies.google.com/privacy?hl=en#infocollect>.

28 <sup>777</sup> Information Google Collects. <https://policies.google.com/privacy?hl=en#infocollect>.



1 from content knowingly designated by users for publication or explicitly provided by users in their  
2 account profiles. Instead, many of these data segments are collected by YouTube through  
3 surveillance of each user’s activity while using the product and even when logged off the product.<sup>778</sup>

4 710. As with Meta, Google’s data policy does not inform users, and did not inform  
5 Plaintiffs, that the more time individuals spend using YouTube, the more ads Google can deliver  
6 and the more money it can make, or that the more time users spend on YouTube, the more YouTube  
7 learns about them, and the more it can sell to advertisers the ability to micro-target highly  
8 personalized ads.

9 711. Google’s secret virtual dossiers on its users, including child users, fuel its algorithms.  
10 The company relies on this data—including data plainly reflecting use by children—to train its  
11 algorithms. A Google engineer explained in a 2014 presentation:

12 What do I mean by a training example? It’s a single-user experience.  
13 On YouTube, perhaps it’s that one [Thomas the Tank Engine]  
14 webpage my son saw six months ago, along with all the  
15 recommendations that we showed him. We also record the outcome  
to know whether the recommendations we made are good or whether  
they’re bad. That’s a single training exercise. On a large property, you  
can easily get into hundreds of billions of these.<sup>779</sup>

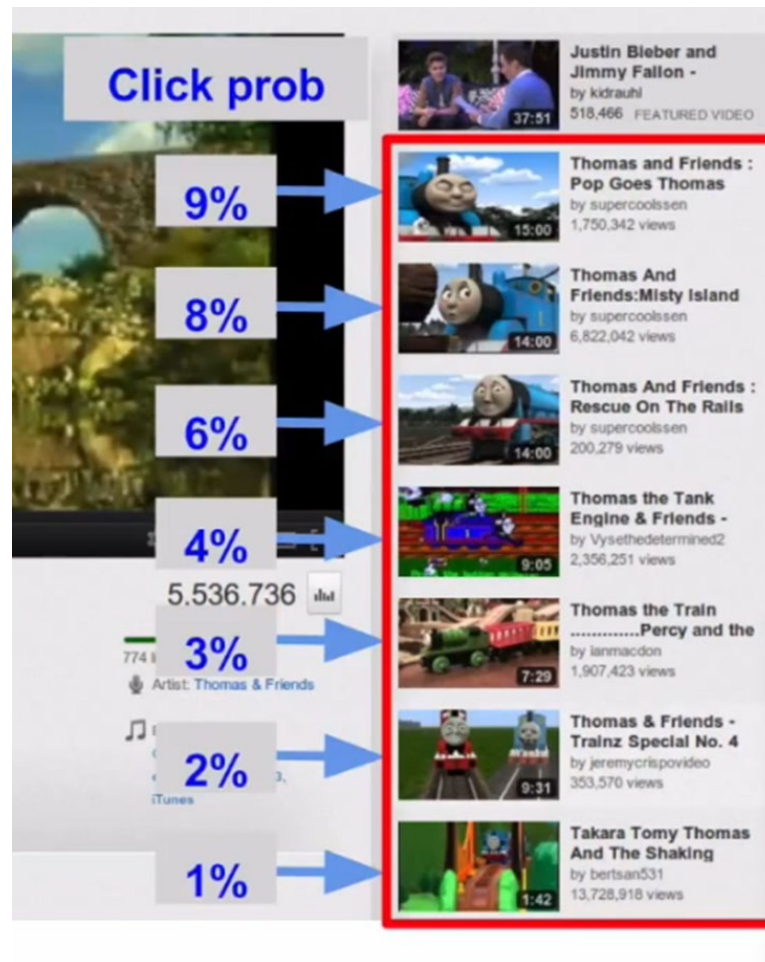
16 The engineer illustrated this with a slide, excerpted below, presenting how algorithmic analysis  
17 both structured the format of recommendations of Thomas the Tank Engine YouTube videos and  
18 provided information to inform algorithmic training through user engagement:

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25 <sup>778</sup> About Targeting for Video Campaigns, Google,  
26 <https://support.google.com/youtube/answer/2454017?hl=en>.

27 <sup>779</sup> Alex Woodie, *Inside Sibyl, Google’s Massively Parallel Machine Learning Platform*,  
28 Datanami (Jul. 17, 2014), <https://www.datanami.com/2014/07/17/inside-sibyl-googles-massively-parallel-machine-learning-platform/>.

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712. Through these and other efforts, YouTube has delivered massive amounts of advertising revenue to Google. In 2021 alone, YouTube generated about \$29 billion in revenue selling ads on its site.<sup>780</sup>

3. **Google intentionally designed product features to addict children and adolescents.**

713. Google devised and continues to employ interrelated product features to increase usage and maximize engagement by teenagers and children. Simply put, YouTube’s product features are engineered to induce excessive use and to addict adolescents and children to the product.

<sup>780</sup> Andrew Hutchinson, *YouTube Generated \$28.8 Billion in Ad Revenue in 2021, Fueling the Creator Economy*, Social Media Today (Feb. 2, 2022), <https://www.socialmediatoday.com/news/youtube-generated-288-billion-in-ad-revenue-in-2021-fueling-the-creator/618208/>; Jennifer Elias, *YouTube Is a Media Juggernaut That Could Soon Equal Netflix in Revenue*, CNBC (Apr. 27, 2021), <https://www.cnbc.com/2021/04/27/youtube-could-soon-equal-netflix-in-revenue.html>.

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a. **Google’s age-verification measures and parental controls are defective.**

714. Google’s strategy to entrench minor users begins with access. The company purports to impose a minimum age requirement and claims to verify the age of its users. But those features are defective, as they do little to prevent children and teenagers from using the product.

715. Anyone with access to the Internet, regardless of age, can use YouTube and access every video available through the product without registering an account or verifying their age. YouTube does not even ask for age information before allowing users to consume YouTube videos.

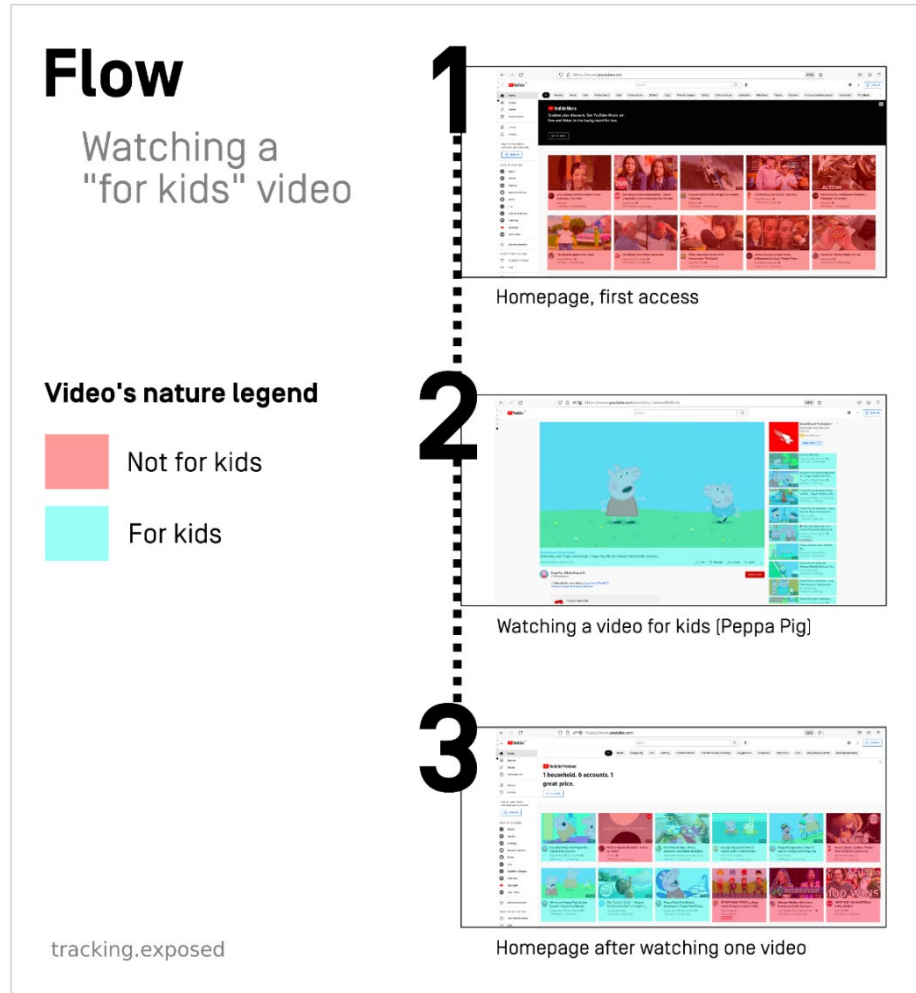
716. A user needs an account to post content or like (or comment) on videos. But to get one, a user needs only enter a valid email address and a birthday. Google does nothing to verify the birthday entered by users in the U.S.—and the product freely permits users to change their birthdays in their account settings after creating an account.

717. YouTube’s defective age verification feature means that Google fails to protect children from other product features discussed below that Google knows to be harmful to kids.

718. For example, for users 13-17, Google claims to disable YouTube’s autoplay feature. However, that measure is virtually meaningless because children can use YouTube without logging into any account or by logging in but misreporting their age.

719. Even if children use YouTube Kids, that product contains many of the same defects YouTube does, including a harmful, manipulative algorithm, as alleged below.

1 720. Google cannot credibly claim that it is unaware of the fact and extent of youth usage  
2 of YouTube. Google’s system can “identify children as being much younger than 13.”<sup>781</sup> According  
3 to Tracking Exposed, YouTube can rapidly identify a user as a child.<sup>782</sup>



21 721. Google engineers have publicly admitted YouTube’s algorithm tracks user age. As  
22 Google engineers outlined in a 2016 paper on YouTube’s recommendation system, “[d]emographic  
23 features are important for providing priors so that the recommendations behave reasonably for new  
24 users. The user’s geographic region and device are embedded and concatenated. Simple binary and

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26 <sup>781</sup> Tracking Exposed Special Report: Non-Logged-In Children Using YouTube at 6 (July 1,  
2022), <https://tracking.exposed/pdf/youtube-non-logged-kids-03July2022.pdf>.

27 <sup>782</sup> Tracking Exposed Special Report: Non-Logged-In Children Using YouTube at 15, 18 (July 1,  
28 2022), <https://tracking.exposed/pdf/youtube-non-logged-kids-03July2022.pdf>.

1 continuous features such as the user's gender, logged-in state and age are input directly into the  
2 network as real values normalized to [0; 1].”<sup>783</sup>

3 722. The Tracking Exposed Report indicates that there is “strong evidence” that Google’s  
4 systems continue to refine and develop a more precise estimate for under 18 users, but the product  
5 does not “redirect them to YouTube Kids.”<sup>784</sup>

6 **b. YouTube is defectively designed to inundate users with features**  
7 **that use intermittent variable rewards and reciprocity.**

8 723. Google uses a series of interrelated design features that exploit known mental  
9 processes to induce YouTube’s users to use the product more frequently, for more extended periods,  
10 and with more intensity (i.e., providing more comments and likes). Google knows children and  
11 adolescents, whose brains are still developing, are particularly susceptible to these addictive  
12 features.

13 724. Google designed its product so that when children and teenagers use it, they are  
14 inundated with interface design features specifically designed to dominate their attention and  
15 encourage excessive use. Every aspect of how YouTube presents the format of a given page with a  
16 video is structured to ensure unimpeded viewing of the videos, alongside download, like, and share  
17 buttons, plus recommendations for more videos to watch. The organization of these features is  
18 carefully calibrated to adjust to the space constraints of a user’s device, such that minimal effort is  
19 needed to watch a video unimpeded. YouTube even has an ambient mode that uses dynamic color  
20 sampling so that the YouTube product adapts to the video being watched and the user is not  
21 distracted by the video’s borders.<sup>785</sup>

22 725. Like the other Defendants, Google has designed YouTube with features that exploit  
23 neuropsychology to maximize the time users (including children) spend using the product.

24 <sup>783</sup> Paul Covington et al., *Deep Neural Networks for YouTube Recommendations*, Google (2016),  
25 <https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf>.

26 <sup>784</sup> Tracking Exposed Special Report: Non-Logged-In Children Using YouTube at 6, 19 (July 1,  
2022), <https://tracking.exposed/pdf/youtube-non-logged-kids-03July2022.pdf>.

27 <sup>785</sup> YouTube rolling out black dark theme, ‘Ambient Mode,’ and other video player updates (Oct.  
28 24, 2022). <https://9to5google.com/2022/10/24/youtube-ambient-mode/>.

1           726.    IVR features, such as notifications and likes, compel YouTube content creators and  
2 consumers, particularly children, to use the product habitually and excessively. For example, in  
3 order to create and upload content to YouTube, a user under 13 may submit a fictitious birthdate in  
4 order to gain access to posting privileges. Once the young user has a logged-in account, they are  
5 can receive notifications and likes. For example, the logged in user can subscribe to various  
6 YouTube channels, which in turn will send them notifications from various channels they follow.  
7 Similarly, young content creators who upload videos to YouTube are able to track the likes received  
8 by the video. These features psychologically reward creators who upload videos to YouTube. As  
9 explained above, receiving a “Like” shows others’ approval and activates the brain’s reward  
10 region.<sup>786</sup> Thus, users’ ability to like content encourages creators to use the product compulsively,  
11 seeking additional pleasurable experiences.

12           727.    Another YouTube defect is the design Google engineers deploy to induce “flow”  
13 state among users, which, as described above, is dangerous to children because it induces excessive  
14 use and poses a risk of addiction, compulsive use, and sleep deprivation.

15           728.    YouTube uses two design features that induce flow state. The first is its panel of  
16 recommended videos. YouTube recommends videos both on the home page and on each video page  
17 in the “Up Next” panel.<sup>787</sup> This panel pushes an endless stream of videos that YouTube’s algorithm  
18 selects and “suggests” to keep users watching by teasing a pipeline of upcoming content.

19           729.    The second feature is autoplay, which complements the Up Next panel and  
20 seamlessly takes users through the list of upcoming videos without users having to affirmatively  
21 click on or search for other videos. This constant video stream—comprised of videos recommended  
22 by YouTube’s algorithm—is the primary way Google increases the time users spend using its  
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25 <sup>786</sup> See, e.g., Lauren E. Sherman et al., *The Power of the Like in Adolescence: Effects of Peer*  
26 *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/>.

27 <sup>787</sup> Recommended Videos, YouTube, [https://www.youtube.com/howyoutubeworks/product-](https://www.youtube.com/howyoutubeworks/product-features/recommendations/)  
28 [features/recommendations/](https://www.youtube.com/howyoutubeworks/product-features/recommendations/).

1 product. This endless video succession induces users to enter a flow state of consumption, which is  
2 particularly dangerous for children.

3 730. In an April 2021 letter to YouTube CEO Susan Wojcicki, the House Committee on  
4 Oversight and Reform criticized the autoplay feature:

5 This places the onus on the child to stop their viewing activity, rather  
6 than providing a natural break or end point. Without that natural  
7 stopping point, children are likely to continue watching for long  
8 periods of time.<sup>788</sup>

9 731. This defect is particularly acute for Google’s recently launched YouTube Shorts.  
10 YouTube Shorts enables users to create short videos up to sixty seconds in length, in a full-screen  
11 format popularized by TikTok and copied by Instagram Reels. As in Reels and TikTok, Shorts are  
12 presented in an algorithmically generated feed; users can watch new videos by swiping up on their  
13 smartphones. Instead of presenting videos chronologically, they are organized in a manner to drive  
14 the most watch time, as dictated by the algorithm. Indeed, Google hired TikTok’s North American  
15 head, Kevin Ferguson, and other TikTok engineers to develop YouTube Shorts.<sup>789</sup>

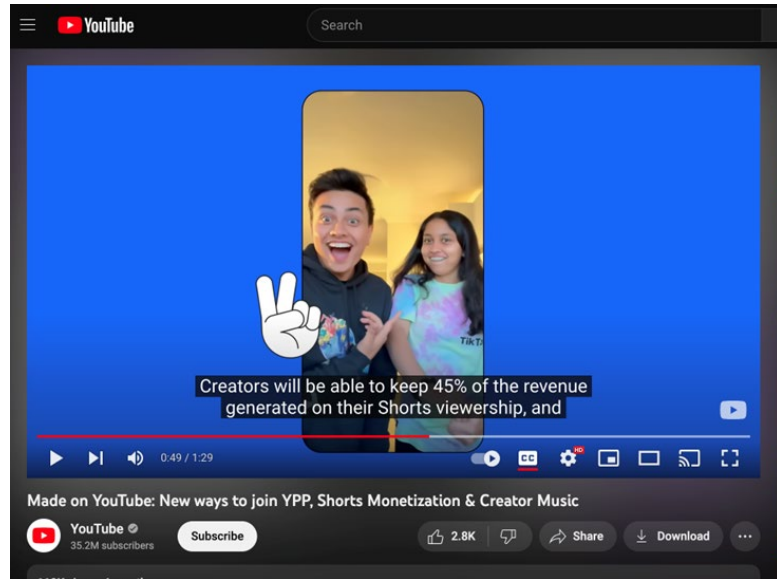
16 732. An important target audience for YouTube Shorts is children. For example, YouTube  
17 Shorts features content, such as child “influencers,” that appeals to children. YouTube Shorts also  
18 contains similar defects to other Defendants’ short form products, including the ability to scroll  
19 continuously through YouTube Shorts, inducing a “flow-state” that distorts users’ sense of time and  
20 facilitates extended use, and dangerous exploitation of “social comparison” techniques by  
21 promoting misleadingly idealized portrayals from influencers and others who are rewarded for  
22 posting popular material.  
23

24 <sup>788</sup> Letter from Rep. Raja Krishnamoorthi, Chairman, Subcomm. on Economic and Consumer  
25 Policy, to Susan Wojcicki, CEO, YouTube (Apr. 6, 2021),  
26 <https://oversightdemocrats.house.gov/sites/democrats.oversight.house.gov/files/2021-04-06.RK%20to%20Wojcicki-YouTube%20re%20YouTube%20Kids%20Content.pdf>.

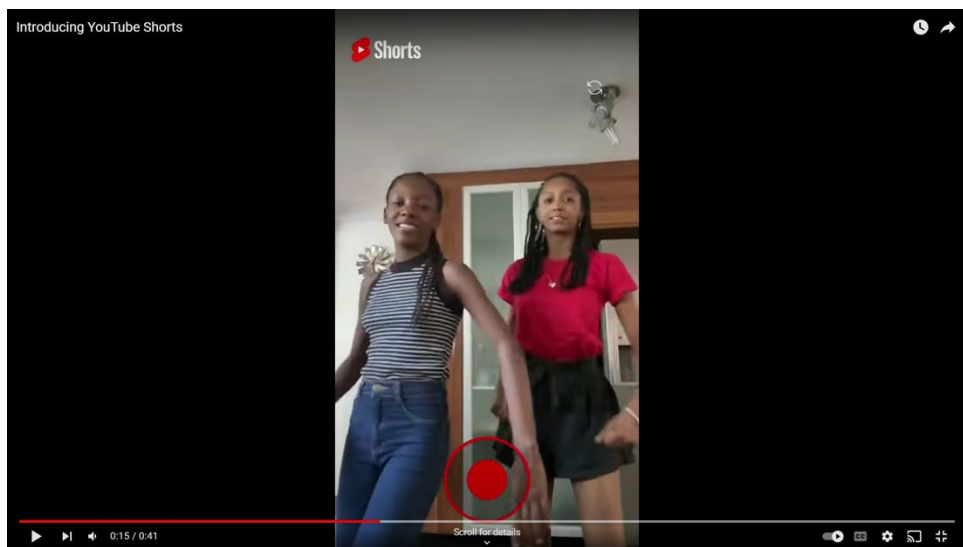
27 <sup>789</sup> Richard Nieva, *In the Age of TikTok, YouTube Shorts Is a Platform in Limbo*, Forbes (Dec. 20,  
28 2022), <https://www.forbes.com/sites/richardnieva/2022/12/20/youtube-shorts-monetization-multiformat/>.



1           733. Almost immediately upon launch, Google began marketing YouTube Shorts to  
2 children. For example, Google launched an advertisement featuring images of children and  
3 teenagers (like in the screenshot below) engaging with the YouTube Shorts product.



14           734. Similarly, another advertisement for Shorts explains how creators on YouTube can  
15 keep revenue generated by their Shorts' viewership, while an image of a video creator young enough  
16 to be in braces appears on screen.<sup>790</sup>



27 <sup>790</sup> [Made on YouTube: New ways to join YPP, Shorts Monetization & Creator Music.](https://www.youtube.com/watch?v=h6TrvCV3NdU)  
28 [https://www.youtube.com/watch?v=h6TrvCV3NdU.](https://www.youtube.com/watch?v=h6TrvCV3NdU)



1           735. Shorts is one of YouTube’s interrelated design features that exploit known mental  
2 processes to induce YouTube users to use the product more frequently, for more extended periods,  
3 and with more intensity (i.e., providing more comments and likes). Not surprisingly, given its  
4 copycat origin, the defects in Shorts replicate the defects in TikTok and Instagram Reels, discussed  
5 above. Google knows or should have known that children, whose brains are still developing, are  
6 particularly susceptible to such addictive features.

7           736. YouTube has monetized users’ susceptibility to IVR by allowing creators who obtain  
8 more than a thousand subscribers with four-thousand valid public watch hours to qualify for the  
9 YouTube Partner Program. Once a creator obtains this elite status, they are rewarded with “Super  
10 Chat” and “Super Stickers”—special images or distinct messages that other users can purchase and  
11 place on a creator’s channel.<sup>791</sup> Paid messages, including the amount donated, are visible to all users.  
12 And the more a user pays for these promotions, the more prominent and longer the image is  
13 displayed. Both features are intended to allow a user to show support for, or connect with, their  
14 favorite YouTube creators. Similar to the “Likes” feature, this paid support activates the reward  
15 center of the content creator’s brain and releases dopamine while the creator is generating revenue  
16 for YouTube.

17                                   **c. Google’s algorithms are designed to maximize “watch time.”**

18           737. Google engineers algorithms to recommend videos to YouTube users.

19           738. YouTube began building its’ algorithms in 2008.<sup>792</sup> Its goal was to maximize how  
20 long users spent watching YouTube videos.<sup>793</sup>

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23 \_\_\_\_\_  
24 <sup>791</sup> YouTube Partner Program: How to Make Money on YouTube,  
[https://www.youtube.com/intl/en\\_us/creators/how-things-work/video-monetization/](https://www.youtube.com/intl/en_us/creators/how-things-work/video-monetization/).

25 <sup>792</sup> Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021),  
26 <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

27 <sup>793</sup> Ben Popken, *As Algorithms Take Over, YouTube’s Recommendations Highlight a Human*  
28 *Problem*, NBC (Apr. 19, 2018), <https://www.nbcnews.com/tech/social-media/algorithms-take-over-youtube-s-recommendations-highlight-human-problem-n867596>.

1           739. These algorithms select videos that populate the YouTube homepage, rank results in  
2 user searches, and push videos for viewers to watch through the “Up Next” feature.

3           740. YouTube designed its algorithms to manipulate users and induce them to use  
4 YouTube excessively.

5           741. A former YouTube engineer explained that when he designed YouTube’s algorithm,  
6 YouTube wanted to optimize for one key metric: “watch time.”<sup>794</sup> The engineer elaborated that  
7 “[i]ncreasing users’ watch time is good for YouTube’s business model” because it increases  
8 advertising revenue.<sup>795</sup>

9           742. In 2012, the YouTube Head of Content Creator Communications similarly  
10 explained: “When we suggest videos, we focus on those that increase the amount of time that the  
11 viewer will spend watching videos on YouTube, not only on the next view, but also successive  
12 views thereafter.”<sup>796</sup>

13           743. The current algorithm uses deep-learning neural networks, a type of software that  
14 returns outputs based on data fed into it.<sup>797</sup> The VP of Engineering at YouTube explained that it is  
15 “constantly evolving, learning every day from over 80 billion pieces of information we call  
16 signals.”<sup>798</sup> Those signals include “clicks, watchtime, survey responses, and sharing, likes, and  
17

18 \_\_\_\_\_  
19 <sup>794</sup> William Turton, *How YouTube’s Algorithm Prioritizes Conspiracy Theories*, Vice (Mar. 5,  
20 2018), <https://www.vice.com/en/article/d3w9ja/how-youtubes-algorithm-prioritizes-conspiracy-theories>.

21 <sup>795</sup> Jesselyn Cook & Sebastian Murdock, *YouTube Is a Pedophile’s Paradise*, Huffington Post  
22 (Mar. 20, 2020), [https://www.huffpost.com/entry/youtube-pedophile-paradise\\_n\\_5e5d79d1c5b6732f50e6b4db](https://www.huffpost.com/entry/youtube-pedophile-paradise_n_5e5d79d1c5b6732f50e6b4db).

23 <sup>796</sup> Eric Meyerson, *YouTube Now: Why We Focus on Watch Time*, YouTube (Aug. 10, 2012),  
24 <https://blog.youtube/news-and-events/youtube-now-why-we-focus-on-watch-time/>.

25 <sup>797</sup> Alexis C. Madrigal, *How YouTube’s Algorithm Really Works*, The Atlantic (Nov. 8, 2018),  
26 <https://www.theatlantic.com/technology/archive/2018/11/how-youtubes-algorithm-really-works/575212/>; Paul Covington et al., *Deep Neural Networks for YouTube Recommendations*,  
Google (2016), <https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf>.

27 <sup>798</sup> Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021),  
28 <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

1 dislikes.”<sup>799</sup> They also include user demographic information like age and gender.<sup>800</sup>

2 744. Google’s algorithm also “uses data from your Google Account activity to influence  
3 your recommendations.”<sup>801</sup>

4 745. The algorithm “develops dynamically” to predict which posts will hold the user’s  
5 attention.<sup>802</sup> That is, it can also determine which “signals” are more important to individual users.  
6 For example, if a user shares every video they watch, including those they rate low, the algorithm  
7 learns to discount the significance of the user’s shares when recommending content.<sup>803</sup>

8 746. Besides the algorithm’s self-learning capability, Google also consistently refines the  
9 algorithm, updating it “multiple times a month.”<sup>804</sup>

10 747. In 2017, the former technical lead for YouTube recommendations explained that  
11 “one of the key things [the algorithm] does is it’s able to generalize.”<sup>805</sup> While older iterations “were  
12 pretty good at saying, here’s another [video] just like” ones the user had watched, by 2017, the  
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16 <sup>799</sup> Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021),  
17 <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

18 <sup>800</sup> Paul Covington et al., *Deep Neural Networks for YouTube Recommendations*, Google (2016),  
19 <https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf>.

20 <sup>801</sup> Manage Your Recommendations and Search Results, Google,  
21 <https://support.google.com/youtube/answer/6342839?hl=en&co=GENIE.Platform%3DAndroid>.

22 <sup>802</sup> Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021),  
23 <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

24 <sup>803</sup> Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021),  
25 <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

26 <sup>804</sup> Nilay Patel, *YouTube Chief Product Officer Neal Mohan on The Algorithm, Monetization, and  
27 the Future for Creators*, Verge (Aug. 3, 2021), <https://www.theverge.com/22606296/youtube-shorts-fund-neal-mohan-decoder-interview>.

28 <sup>805</sup> Casey Newton, *How YouTube Perfected the Feed*, Verge (Aug. 30, 2017),  
<https://www.theverge.com/2017/8/30/16222850/youtube-google-brain-algorithm-video-recommendation-personalized-feed>.

1 algorithm could discern “patterns that are less obvious,” identifying “adjacent relationships” of  
2 “similar but not exactly the same” content.<sup>806</sup>

3 748. Over time, the algorithm became increasingly successful in getting users to watch  
4 recommended content. By 2018, YouTube Chief Product Officer Neal Mohan said that the YouTube  
5 algorithm was responsible for more than 70% of users’ time using the product.<sup>807</sup> That is, more than  
6 70% of the time users spend on YouTube was from recommendations Google’s algorithm pushed  
7 to them rather than videos identified by users through independent searches.

8 749. The algorithm also keeps users watching for longer periods. For instance, Mohan  
9 explained that mobile device users watch for more than 60 minutes on average per session “because  
10 of what our recommendations engines are putting in front of [them].”<sup>808</sup>

11 750. The algorithm is particularly effective at addicting teenagers to the product. In 2022,  
12 Pew Research Center found that “[a]bout three-quarters of teens visit YouTube at least daily,  
13 including 19% who report using the site or app almost constantly.”<sup>809</sup>

14 751. A software engineer explained that the algorithm is “an addiction engine.”<sup>810</sup> He  
15 raised concerns with YouTube staff, who said they had no intention to change the algorithms. After  
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18 <sup>806</sup> Casey Newton, *How YouTube Perfected the Feed*, Verge (Aug. 30, 2017),  
19 <https://www.theverge.com/2017/8/30/16222850/youtube-google-brain-algorithm-video-recommendation-personalized-feed>.

20 <sup>807</sup> Joan E. Solsman, *YouTube’s AI Is the Puppet Master over Most of What You Watch*, CNET  
21 (Jan. 1010, 2018), <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/>.

22 <sup>808</sup> Joan E. Solsman, *YouTube’s AI Is the Puppet Master over Most of What You Watch*, CNET  
23 (Jan. 1010, 2018), <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/>.

24 <sup>809</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>.

26  
27 <sup>810</sup> Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*,  
28 Bloomberg (Apr. 2, 2019), <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant>.

1 all, the engineer explained, the algorithm works as intended: “it makes a lot of money.”<sup>811</sup>

2 752. Since users watch more than one billion hours of YouTube videos daily and  
3 approximately 70% of the time is spent on videos pushed to users by YouTube’s “recommendation  
4 engine,” Google’s algorithms are responsible for hundreds of millions of hours users spend watching  
5 videos on YouTube each day.<sup>812</sup>

6 753. The videos pushed out to users by Google’s “recommendation engine” are more  
7 likely to be addictive and more likely to lead to harm. For example, “fear-inducing videos cause the  
8 brain to receive a small amount of dopamine,” which acts as a reward and creates a desire to do  
9 something over and over.<sup>813</sup> That dopaminergic response makes it more likely that a user will watch  
10 the harmful video, which the algorithm interprets as signaling interest and preference. Former  
11 Google engineers told the Wall Street Journal that “[t]he algorithm doesn’t seek out extreme  
12 videos . . . but looks for clips that data show are already drawing high traffic and keeping people on  
13 the site. Those videos often tend to be sensationalist.”<sup>814</sup> An investigation by *Bloomberg* put it  
14 simply: “In the race to one billion hours, a formula emerged: Outrage equals attention.”<sup>815</sup>

17 <sup>811</sup> Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*,  
18 *Bloomberg* (Apr. 2, 2019), <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant>.

19 <sup>812</sup> See Joan E. Solsman, *YouTube’s AI Is the Puppet Master over Most of What You Watch*, *CNET*  
20 (Jan. 10, 2018), <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/>.

21 <sup>813</sup> Josephine Bila, *YouTube’s Dark Side Could be Affecting Your Child’s Mental Health*, *CNBC*  
22 (Feb. 13, 2018), <https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html>.

23 <sup>814</sup> *Why is YouTube Suggesting Extreme and Misleading Content (2/7/2018)*,  
24 <https://www.youtube.com/watch?v=7AjA3Df6i6o>; see also Josephine Bila, *YouTube’s Dark Side*  
25 *Could be Affecting Your Child’s Mental Health*, *CNBC* (Feb. 13, 2018),  
26 <https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html>.

27 <sup>815</sup> Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*,  
28 *Bloomberg* (Apr. 2, 2019), <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant>.

1           754. Google’s algorithm makes it more likely for children to encounter harmful content  
2 by pushing them down “rabbit holes,” which “[lead] viewers to incrementally more extreme videos  
3 or topics, which . . . hook them in.”<sup>816</sup> For example, a user might “[w]atch clips about bicycling, and  
4 YouTube might suggest shocking bike race crashes.”<sup>817</sup> In this way, the algorithm makes it more  
5 likely that youth will encounter content that is violent, sexual, or encourages self-harm, among other  
6 types of harmful content.

7           755. YouTube’s “recommendation engine” creates a vicious cycle in its ruthless quest to  
8 grow view time. Users who get pushed down rabbit holes then become *models* for the algorithm.  
9 And the algorithm consequently emphasizes that harmful content, disproportionately pushing it to  
10 more users. That is, because Google designed the algorithm to “maximize engagement,”  
11 uncommonly engaged users become “models to be reproduced.”<sup>818</sup> Thus, the algorithms will “favor  
12 the content of such users,” which is often more extreme.<sup>819</sup>

13           756. The algorithm also makes extreme content less likely to get flagged or reported. As  
14 Guillaume Chaslot explained, the algorithm becomes “more efficient” over time “at recommending  
15 specific user-targeted content.”<sup>820</sup> And as the algorithm improves, “it will be able to more precisely  
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20 <sup>816</sup> Max Fisher & Amanda Taub, *On YouTube’s Digital Playground, an Open Gate for Pedophiles*,  
21 NY Times (June 3, 2019), <https://www.nytimes.com/2019/06/03/world/americas/youtube-pedophiles.html>.

22 <sup>817</sup> Max Fisher & Amanda Taub, *On YouTube’s Digital Playground, an Open Gate for Pedophiles*,  
23 NY Times (June 3, 2019), <https://www.nytimes.com/2019/06/03/world/americas/youtube-pedophiles.html>.

24 <sup>818</sup> Guillaume Chaslot, *The Toxic Potential of YouTube’s Feedback Loop*, Wired (Jul. 13, 2019),  
25 <https://www.wired.com/story/the-toxic-potential-of-youtubes-feedback-loop/>.

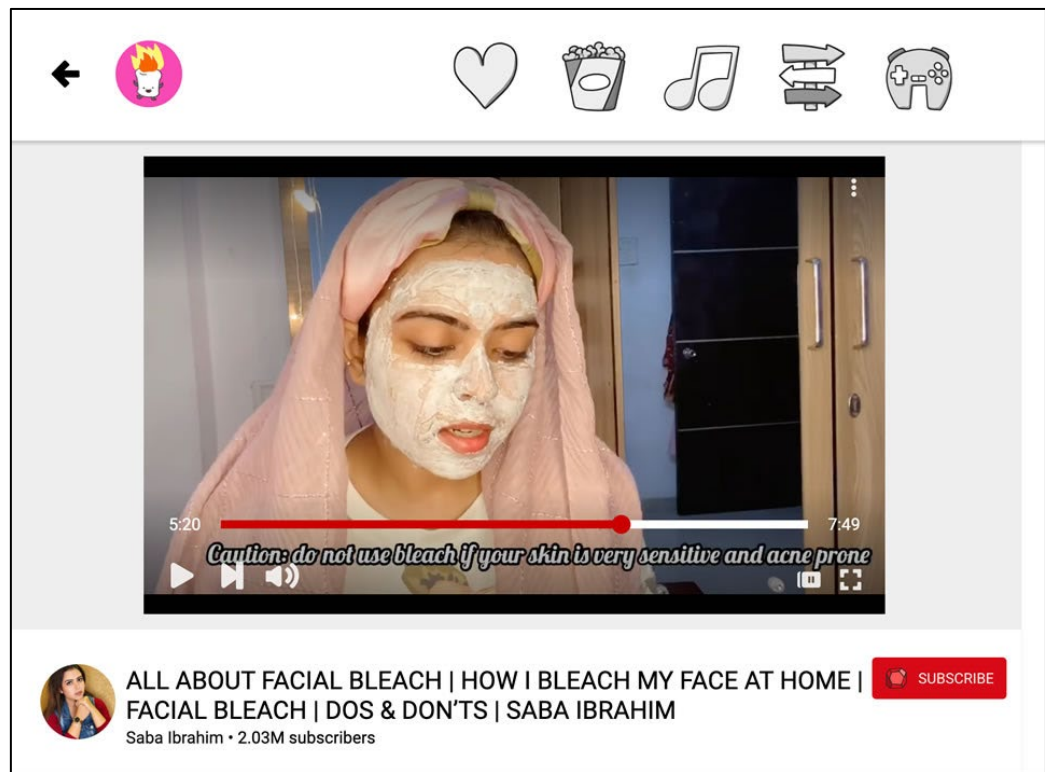
26 <sup>819</sup> Guillaume Chaslot, *The Toxic Potential of YouTube’s Feedback Loop*, Wired (Jul. 13, 2019),  
<https://www.wired.com/story/the-toxic-potential-of-youtubes-feedback-loop/>.

27 <sup>820</sup> Guillaume Chaslot, *The Toxic Potential of YouTube’s Feedback Loop*, Wired (Jul. 13, 2019),  
28 <https://www.wired.com/story/the-toxic-potential-of-youtubes-feedback-loop/>.



1 predict who is interested in [harmful or extreme] content.”<sup>821</sup> So “problems with the algorithm  
2 become exponentially harder to notice, as [harmful] content is unlikely to be flagged or reported.”<sup>822</sup>

3 757. Even on YouTube Kids, Google’s product designed for children under 13 years old,  
4 researchers from the Tech Transparency Project found that the product’s algorithm fed children  
5 content related to drugs and guns, as well as beauty and diet tips that risked creating harmful body  
6 image issues. For example, the researchers found videos speaking positively about cocaine and  
7 crystal meth; instructing users, step-by-step, how to conceal a gun; explaining how to bleach one’s  
8 face at home; and stressing the importance of burning calories.<sup>823</sup>



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24 <sup>821</sup> Guillaume Chaslot, *The Toxic Potential of YouTube’s Feedback Loop*, Wired (Jul. 13, 2019),  
<https://www.wired.com/story/the-toxic-potential-of-youtubes-feedback-loop/>.

25 <sup>822</sup> Guillaume Chaslot, *The Toxic Potential of YouTube’s Feedback Loop*, Wired (Jul. 13, 2019),  
26 <https://www.wired.com/story/the-toxic-potential-of-youtubes-feedback-loop/>.

27 <sup>823</sup> *Guns, Drugs, and Skin Bleaching: YouTube Kids Poses Risks to Children*, Tech Transparency  
28 Project (May 5, 2022), <https://www.techtransparencyproject.org/articles/guns-drugs-and-skin-bleaching-youtube-kids-still-poses-risks-children>.

1           758. Amy Kloer, a campaign director with the child safety group ParentsTogether, spent  
2 an hour on her preschool-age child’s YouTube Kids account and found videos “encouraging kids  
3 how to make their shirts sexier, a video in which a little boy pranks a girl over her weight, and a  
4 video in which an animated dog pulls objects out of an unconscious animated hippo’s butt.”<sup>824</sup>  
5 Another parent recounted how YouTube Kids autoplay feature led her 6-year-old daughter to “an  
6 animated video that encouraged suicide.”<sup>825</sup>

7           759. These are not isolated examples. According to Pew Research Center, 46% of parents  
8 of children 11 or younger report that children encountered videos that were inappropriate for their  
9 age.<sup>826</sup> And kids do not “choose” to encounter those inappropriate videos—YouTube’s algorithm—  
10 its “recommendation engine”—directs and pushes them there. Again, YouTube’s algorithm is  
11 responsible for 70% of the time users spend using the product.<sup>827</sup>

12           760. Other reports have confirmed that YouTube’s algorithm pushes users towards  
13 harmful conduct. In 2021, the Mozilla Foundation studied 37,000 YouTube users, finding that 71%  
14 of all reported negative user experiences came from videos recommended to users by Google’s  
15 algorithm.<sup>828</sup> And users were 40% more likely to report a negative experience from a video  
16 recommended by YouTube’s algorithm than from one they searched for.<sup>829</sup> Importantly, videos that

17 \_\_\_\_\_  
18 <sup>824</sup> Rebecca Heilweil, *YouTube’s Kids App Has a Rabbit Hole Problem*, Vox (May 12, 2021),  
19 <https://www.vox.com/recode/22412232/youtube-kids-autoplay>.

20 <sup>825</sup> Rebecca Heilweil, *YouTube’s Kids App Has a Rabbit Hole Problem*, Vox (May 12, 2021),  
21 <https://www.vox.com/recode/22412232/youtube-kids-autoplay>.

22 <sup>826</sup> Brooke Auxier et al., *Parenting Children in The Age of Screens*, Pew Rsch. Ctr. (July 28,  
23 2020), <https://www.pewresearch.org/internet/2020/07/28/parental-views-about-youtube/>.

24 <sup>827</sup> Joan E. Solsman, *YouTube’s AI Is the Puppet Master over Most of What You Watch*, CNET  
25 (Jan. 1010, 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/)  
26 [mohan/](https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/).

27 <sup>828</sup> YouTube Regrets: A Crowdsourced Investigation into YouTube’s Recommendation  
28 Algorithm, Mozilla Foundation 13 (July 2021),  
29 [https://assets.mofoprod.net/network/documents/Mozilla\\_YouTube\\_Regrets\\_Report.pdf](https://assets.mofoprod.net/network/documents/Mozilla_YouTube_Regrets_Report.pdf).

30 <sup>829</sup> YouTube Regrets: A Crowdsourced Investigation into YouTube’s Recommendation  
31 Algorithm, Mozilla Foundation at 3 (July 2021),



1 elicited those negative experiences “acquired 70% more views per day than other videos watched  
2 by [study] volunteers.”<sup>830</sup>

3 761. Those defects combine to compel children and teenagers to overuse a product that  
4 feeds them harmful content, which in turn can adversely affect mental health. One 10-year-old girl  
5 in the Mozilla Foundation study who sought “dance videos, ended up encountering videos  
6 promoting extreme dieting.”<sup>831</sup> Her mother explained that “[s]he is now restricting her eating and  
7 drinking.”<sup>832</sup> Another middle-schooler compulsively consumed YouTube videos every day after she  
8 came home from school.<sup>833</sup> Eventually, she became depressed and “got the idea to overdose  
9 online.”<sup>834</sup> Three weeks later, she “down[ed] a bottle of Tylenol.” She landed in rehab for digital  
10 addiction due to her compulsive YouTube watching.<sup>835</sup>

11 762. Those experiences are not unique. Mental health experts have warned that YouTube  
12 is a growing source of anxiety and inappropriate sexual behavior among kids under 13 years old.  
13 Natasha Daniels, a child psychotherapist, described treating children between 8 and 10 years old,

14 \_\_\_\_\_  
15 [https://assets.mofoprod.net/network/documents/Mozilla\\_YouTube\\_Regrets\\_Report.pdf](https://assets.mofoprod.net/network/documents/Mozilla_YouTube_Regrets_Report.pdf).

16 <sup>830</sup> YouTube Regrets: A Crowdsourced Investigation into YouTube’s Recommendation  
17 Algorithm, Mozilla Foundation at 3 (July 2021),  
[https://assets.mofoprod.net/network/documents/Mozilla\\_YouTube\\_Regrets\\_Report.pdf](https://assets.mofoprod.net/network/documents/Mozilla_YouTube_Regrets_Report.pdf).

18 <sup>831</sup> YouTube Regrets: A Crowdsourced Investigation into YouTube’s Recommendation  
19 Algorithm, Mozilla Foundation at 13 (July 2021),  
[https://assets.mofoprod.net/network/documents/Mozilla\\_YouTube\\_Regrets\\_Report.pdf](https://assets.mofoprod.net/network/documents/Mozilla_YouTube_Regrets_Report.pdf).

20 <sup>832</sup> YouTube Regrets: A Crowdsourced Investigation into YouTube’s Recommendation  
21 Algorithm, Mozilla Foundation at 13 (July 2021),  
[https://assets.mofoprod.net/network/documents/Mozilla\\_YouTube\\_Regrets\\_Report.pdf](https://assets.mofoprod.net/network/documents/Mozilla_YouTube_Regrets_Report.pdf).

22 <sup>833</sup> Lesley McClurg, *After Compulsively Watching YouTube, Teenage Girl Lands in Rehab for*  
23 *‘Digital Addiction’*, PBS (May 16, 2017), [https://www.pbs.org/newshour/health/compulsively-](https://www.pbs.org/newshour/health/compulsively-watching-youtube-teenage-girl-lands-rehab-digital-addiction)  
[watching-youtube-teenage-girl-lands-rehab-digital-addiction](https://www.pbs.org/newshour/health/compulsively-watching-youtube-teenage-girl-lands-rehab-digital-addiction).

24 <sup>834</sup> Lesley McClurg, *After Compulsively Watching YouTube, Teenage Girl Lands in Rehab for*  
25 *‘Digital Addiction’*, PBS (May 16, 2017), [https://www.pbs.org/newshour/health/compulsively-](https://www.pbs.org/newshour/health/compulsively-watching-youtube-teenage-girl-lands-rehab-digital-addiction)  
[watching-youtube-teenage-girl-lands-rehab-digital-addiction](https://www.pbs.org/newshour/health/compulsively-watching-youtube-teenage-girl-lands-rehab-digital-addiction).

26 <sup>835</sup> Lesley McClurg, *After Compulsively Watching YouTube, Teenage Girl Lands in Rehab for*  
27 *‘Digital Addiction’*, PBS (May 16, 2017), [https://www.pbs.org/newshour/health/compulsively-](https://www.pbs.org/newshour/health/compulsively-watching-youtube-teenage-girl-lands-rehab-digital-addiction)  
28 [watching-youtube-teenage-girl-lands-rehab-digital-addiction](https://www.pbs.org/newshour/health/compulsively-watching-youtube-teenage-girl-lands-rehab-digital-addiction).

1 who were “found doing sexual things: oral sex, kissing and getting naked and acting out sexual  
2 poses.”<sup>836</sup> This kind of behavior “usually indicates some sort of sexual abuse.”<sup>837</sup> Previously,  
3 Daniels would typically “find a child who has been molested himself or that an adult has been  
4 grooming the child for abuse.”<sup>838</sup> But “in the last five years, when I follow the trail all the way back,  
5 it’s YouTube and that’s where it ends.”<sup>839</sup>

6 763. Daniels has also seen increased rates of anxiety among children using YouTube. And  
7 because of that anxiety, those children “exhibit loss of appetite, sleeplessness, crying fits and  
8 fear.”<sup>840</sup> Ultimately, she says, “YouTube is an ongoing conversation in my therapy practice, which  
9 indicates there’s a problem.”<sup>841</sup>

10 764. One study determined that using Google’s product was “consistently associated with  
11 negative sleep outcomes.”<sup>842</sup> Specifically, for every 15 minutes teens spent using YouTube, they

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13 <sup>836</sup> Josephine Bila, *YouTube’s Dark Side Could be Affecting Your Child’s Mental Health*, CNBC  
14 (Feb. 13, 2018), [https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-  
15 in-young-children.html](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html).

16 <sup>837</sup> Josephine Bila, *YouTube’s Dark Side Could be Affecting Your Child’s Mental Health*, CNBC  
17 (Feb. 13, 2018), [https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-  
18 in-young-children.html](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html).

19 <sup>838</sup> Josephine Bila, *YouTube’s Dark Side Could be Affecting Your Child’s Mental Health*, CNBC  
20 (Feb. 13, 2018), [https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-  
21 in-young-children.html](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html).

22 <sup>839</sup> Josephine Bila, *YouTube’s Dark Side Could be Affecting Your Child’s Mental Health*, CNBC  
23 (Feb. 13, 2018), [https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-  
24 in-young-children.html](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html).

25 <sup>840</sup> Josephine Bila, *YouTube’s Dark Side Could be Affecting Your Child’s Mental Health*, CNBC  
26 (Feb. 13, 2018), [https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-  
27 in-young-children.html](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html).

28 <sup>841</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-sexualization-  
in-young-children.html](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html).

<sup>842</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),  
<https://www.sciencedirect.com/science/article/abs/pii/S1389945722010991?via%3Dihub>.

1 were 24% less likely to get seven hours of sleep. According to Dr. Alon Avidan, director of the  
2 UCLA Sleep Disorders Center, YouTube is particularly sleep disruptive because its  
3 recommendation algorithm and autoplay features make it “so easy to finish one video” and watch  
4 the next.<sup>843</sup> Similarly, a signal that the YouTube algorithm relies on is the ‘time of day’ a user is  
5 watching—a signal that, when used to maximize length of duration with the YouTube product,  
6 induces sleep deprivation.<sup>844</sup>

7 765. Sleep deprivation is, in turn, associated with poor health outcomes. For example,  
8 “insufficient sleep negatively affects cognitive performance, mood, immune function,  
9 cardiovascular risk, weight, and metabolism.”<sup>845</sup>

10 766. Compulsively consuming harmful content on YouTube can also harm brain  
11 development. According to Donna Volpitta, Ed.D, “[c]hildren who repeatedly experience stressful  
12 and/or fearful emotions may under develop parts of their brain’s prefrontal cortex and frontal lobe,  
13 the parts of the brain responsible for executive functions, like making conscious choices and  
14 planning ahead.”<sup>846</sup>

15 767. Google’s algorithm also promotes the creation of and pushes children towards  
16 extremely dangerous prank or “challenge” videos, which often garner thousands of “Likes,” adding  
17 to the pressure children feel to participate.<sup>847</sup> The neurological and psychological techniques by  
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19 <sup>843</sup> Cara Murez, *One App Is Especially Bad for Teens’ Sleep*, U.S. News & World Rep. (Sept. 13,  
20 2022), <https://www.usnews.com/news/health-news/articles/2022-09-13/one-app-is-especially-bad-for-teens-sleep>.

21 <sup>844</sup> YouTube, *How YouTube Works*, <https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content>.

22 <sup>845</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),  
23 <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025>.

24 <sup>846</sup> Josephine Bila, *YouTube’s Dark Side Could be Affecting Your Child’s Mental Health*, CNBC  
25 (Feb. 13, 2018), <https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html>.

26 <sup>847</sup> See, e.g., ViralBrothers, *Revenge 9 – Cheating Prank Turns into Suicide Prank*, YouTube (June  
27 11, 2014), [https://www.youtube.com/watch?v=Bf7xIjz\\_ww0](https://www.youtube.com/watch?v=Bf7xIjz_ww0).

1 which Google, like other Defendants, fosters excessive, addictive use of YouTube in turn foster  
2 watching “challenge” videos.

3 768. Even though Google knew or should have known of these risks to its youth users,  
4 Google’s product lacks any warnings that foreseeable product use could cause these harms.

5 769. And despite all the evidence that YouTube’s design and algorithms harm millions of  
6 children, Google continues to manipulate users and compel them to use the product excessively, to  
7 enhance Google’s bottom line. As a result, young people are confronted with more and more  
8 extreme videos, often resulting in significant harm.

9 **d. YouTube’s defective features include impediments to**  
10 **discontinuing use.**

11 770. As with other Defendants, Google has intentionally and defectively designed its  
12 products so that adolescent users, including Plaintiffs, face significant navigational obstacles and  
13 hurdles when trying to delete or deactivate their accounts, in contrast to the ease with which users  
14 can create those accounts.

15 771. *First*, because YouTube is accessible without a user needing to log in, YouTube users  
16 cannot prevent themselves from being able to access YouTube by deleting their YouTube account.

17 772. *Second*, YouTube accounts are linked to a user’s broader Google account. These  
18 accounts are structured such that, for a user to delete a YouTube account, the user must also delete  
19 the user’s entire Google account. This means that if a YouTube user uses Google’s other products  
20 those accounts will be lost as well. This structure holds hostage user data—if a child needs to keep  
21 their email account through Google (for instance, if that is a requirement of their school), they cannot  
22 delete their YouTube account, even if they want to. If a user stores family photos in Google Photos,  
23 but wants to delete their YouTube account, they must choose between storage for their photos or  
24 deleting their YouTube account. Similarly, if a user has purchased books or movies through  
25 Google’s digital market Google Play, the user’s copy of those books or movies will be deleted if the  
26 user deletes their Google account to rid themselves of YouTube. Google explicitly threatens users  
27 with this consequence on the page where users can delete their account, listing every associated  
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1 account Google will delete and providing examples of the kinds of content that will be deleted if a  
2 user does not back down from their desire to delete their YouTube account.

3 773. *Third*, Google intentionally designed its product so that to delete a user’s Google  
4 account, a user must locate and tap on six different buttons (through six different pages and popups)  
5 from YouTube’s main feed to delete an account successfully. This requires navigating away from  
6 YouTube and into the webpages of other Google products. As with Meta, users are still able to  
7 recover their accounts after deletion—though unlike Meta, Google does not tell users when their  
8 accounts will become unrecoverable, simply threatening that they will soon after deletion.

9 **5. Google facilitates the spread of CSAM and child exploitation.**

10 774. Various design features of YouTube promote and dramatically exacerbate sexual  
11 exploitation, the spread of CSAM, sextortion, and other socially maladaptive behavior that harms  
12 children.

13 775. In 2019, the FTC and New York Attorney General alleged in a federal complaint that  
14 Google and YouTube violated COPPA by collecting personal information from children without  
15 verifiable parental consent.<sup>848</sup>

16 776. Google and YouTube collected persistent identifiers that they used to track viewers  
17 of child-directed channels across the Internet without prior parental notification, in violation of  
18 COPPA.<sup>849</sup>

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23 <sup>848</sup> Fed. Trade Comm’n, *Google and YouTube Will Pay Record \$170 Million for Alleged*  
24 *Violations of Children’s Privacy Law* (2022), [https://www.ftc.gov/news-events/news/press-](https://www.ftc.gov/news-events/news/press-releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law)  
25 [releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-](https://www.ftc.gov/news-events/news/press-releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law)  
[privacy-law](https://www.ftc.gov/news-events/news/press-releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law).

26 <sup>849</sup> Fed. Trade Comm’n, *Google and YouTube Will Pay Record \$170 Million for Alleged*  
27 *Violations of Children’s Privacy Law* (2022), [https://www.ftc.gov/news-events/news/press-](https://www.ftc.gov/news-events/news/press-releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law)  
28 [releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-](https://www.ftc.gov/news-events/news/press-releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law)  
[privacy-law](https://www.ftc.gov/news-events/news/press-releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law).

1 777. Google and YouTube designed the child-centered YouTube Kids product. Despite  
2 its clear knowledge of this channel being directed to children under 13 years old, Google served  
3 targeted advertisements on these channels.<sup>850</sup>

4 778. Google pays its users to create content because it benefits from increased user activity  
5 and receives something of value for its YouTube Partner Program.<sup>851</sup>

6 779. Google allows users to monetize its product to generate revenue for itself and its  
7 users, including users that violate laws prohibiting the sexual exploitation of children.

8 780. According to its own guidelines, Google prohibits using its social media product in  
9 ways that “[endanger] the emotional and physical well-being of minors.”<sup>852</sup>

10 781. Google represents that YouTube “has strict policies and robust operations in place to  
11 tackle content and behavior that is harmful or exploitative to children.”<sup>853</sup>

12 782. Google maintains that its guidelines prohibit images, videos, and comments that put  
13 children at risk, “including areas such as unwanted sexualization, abuse, and harmful and dangerous  
14 acts.”<sup>854</sup>

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20 <sup>850</sup> Fed. Trade Comm’n, *Google and YouTube Will Pay Record \$170 Million for Alleged*  
21 *Violations of Children’s Privacy Law* (2022), <https://www.ftc.gov/news-events/news/press-releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law>.

22 <sup>851</sup> YouTube Partner Program overview & eligibility,  
23 <https://support.google.com/youtube/answer/72851?hl=en>.

24 <sup>852</sup> Child safety policy - YouTube help, Google,  
25 <https://support.google.com/youtube/answer/2801999?hl=en>.

26 <sup>853</sup> Google Transparency Report, Featured Policies,  
<https://transparencyreport.google.com/youtube-policy/featured-policies/child-safety?hl=en>.

27 <sup>854</sup> Google Transparency Report, Featured Policies,  
28 <https://transparencyreport.google.com/youtube-policy/featured-policies/child-safety?hl=en>.

1           783. While Google “may place an age restriction on the video,”<sup>855</sup> its product fails to  
2 implement proper age-verification mechanisms to prevent minor users from accessing age-restricted  
3 content, as discussed above.

4           784. Google fails to prevent collages of images and videos of children showing their  
5 exposed buttocks, underwear, and genitals from racking up millions of views on its product which  
6 are then promoted and monetized by displaying advertisements from major brands alongside the  
7 content.<sup>856</sup>

8           785. Through Google’s product, videos of minors revealing their “bathing suit hauls,”  
9 playing in pools, beaches, waterparks, or performing gymnastics are recommended, shown, and  
10 promoted to child predators who interact with these videos, including commenting to share “time  
11 codes for crotch shots,” to direct others to similar videos, and to arrange to meet up on other social  
12 media products to share and exchange CSAM.<sup>857</sup>

13           786. Multiple YouTube channels dedicated to pre-teen models, young girls stretching, and  
14 teen beauty are routinely oversexualized and manipulated by predators.<sup>858</sup>

15           787. Google’s product recommends and promotes abusive behaviors towards children and  
16 victimizes unsuspecting minors on a mass scale.

17           788. When users search for images and videos of minors, Google’s algorithm pushes  
18 additional videos, which strictly feature children, and this recommended content often includes  
19 promoted content for which Google receives value from advertisers.

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23 <sup>855</sup> Child safety policy - YouTube help, Google,  
<https://support.google.com/youtube/answer/2801999?hl=en>.

24 <sup>856</sup> K.G Orphanides, *On YouTube, a network of pedophiles is hiding in plain sight*, WIRED UK  
25 (2019), <https://www.wired.co.uk/article/youtube-pedophile-videos-advertising>.

26 <sup>857</sup> K.G Orphanides, *On YouTube, a network of pedophiles is hiding in plain sight*, WIRED UK  
27 (2019), <https://www.wired.co.uk/article/youtube-pedophile-videos-advertising>.

28 <sup>858</sup> K.G Orphanides, *On YouTube, a network of pedophiles is hiding in plain sight*, WIRED UK  
(2019), <https://www.wired.co.uk/article/youtube-pedophile-videos-advertising>.



1 789. Users of Google’s product who search for images and videos of minors are further  
2 inundated with comments from other predators that provide hyperlinks to CSAM and opportunities  
3 to share CSAM on other products.<sup>859</sup>

4 790. Google maintains that it is “dedicated to stopping the spread of online child  
5 exploitation videos.”<sup>860</sup> Yet, it fails to implement proper safeguards to prevent the spread of illegal  
6 contraband on its product.

7 791. The troves of data and information about its users that Google collects enable it to  
8 detect, report as legally required, and take actions to prevent instances of sexual grooming,  
9 sextortion, and CSAM distribution, but it has failed to do so. Google continues to make false  
10 representations its “teams work around-the-clock to identify, remove, and report this content.”<sup>861</sup>

11 792. Google has proprietary technology, CSAI Match, that is supposed to combat CSAI  
12 (Child Sexual Abuse Imagery) content online. This technology allows Google to identify known  
13 CSAM contraband being promoted, shared, and downloaded on the YouTube product. Google’s  
14 CSAI Match can identify which portion of the video matches known and previously hashed CSAM  
15 and provide a standardized categorization of the CSAM. When a match is detected by Google using  
16 CSAI Match, it is flagged so that Google can “responsibly action it in accordance to local laws and  
17 regulations.”<sup>862</sup>

18 793. Despite this, Google routinely fails to flag CSAM and regularly fails to adequately  
19 report known content to NCMEC and law enforcement, including CSAM depicting Plaintiffs, and  
20 fails to takedown, remove, and demonetize CSAM.

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23 <sup>859</sup> K.G Orphanides, *On YouTube, a network of pedophiles is hiding in plain sight*, WIRED UK  
(2019), <https://www.wired.co.uk/article/youtube-pedophile-videos-advertising>.

24 <sup>860</sup> YouTube, Protect your content and online community from child exploitation videos,  
25 <https://www.youtube.com/csai-match/>.

26 <sup>861</sup> Google Transparency Report, Google’s efforts to combat online child sexual abuse material,  
<https://transparencyreport.google.com/child-sexual-abuse-material/reporting>.

27 <sup>862</sup> Google’s efforts to combat online child sexual abuse material,  
28 <https://protectingchildren.google/#tools-to-fight-csam>.

1           794.    Separate from CSAM detection, Google also implements an automated system called  
2 Content ID “to easily identify and manage [its] copyright-protected content on YouTube.”<sup>863</sup> Videos  
3 uploaded to YouTube are “scanned against a database of audio and visual content that’s been  
4 submitted to YouTube by copyright owners,” and Google can block, monetize, and track that  
5 material automatically.<sup>864</sup> Google only grants Content ID to copyright owners who meet its own  
6 specific criteria, and these criteria categorically exclude CSAM victims. Google fails to use Content  
7 ID systems to block, remove, demonetize, or report CSAM on its product.

8           795.    In 2018, Google launched “cutting-edge artificial intelligence (AI) that significantly  
9 advances [Google’s] existing technologies,” which Google claimed “dramatically improve[d]”  
10 detection of CSAM that is distributed by its YouTube product.<sup>865</sup> These claims were false, and  
11 misled parents and children into believing its product is safe for minors. Google failed to drastically  
12 improve the frequency of CSAM detection, reports, and takedowns on its product.

13           796.    Google claims that it will “continue to invest in technology and organizations to help  
14 fight the perpetrators of CSAM and to keep our platforms and our users safe from this type of  
15 abhorrent content.”<sup>866</sup> In reality, it fails to do so. Google fails to invest in adequate age verification  
16 and continues to fail to remove CSAM from its product.

17           797.    Google knows or should have known that YouTube facilitates the production,  
18 possession, distribution, receipt, transportation, and dissemination of millions of materials that  
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21 <sup>863</sup> How Content ID Works – YouTube Help, Google,  
22 <https://support.google.com/youtube/answer/2797370?hl=en>.

23 <sup>864</sup> How Content ID Works – YouTube Help, Google,  
24 <https://support.google.com/youtube/answer/2797370?hl=en>.

25 <sup>865</sup> Nikola Todorovic, *Using AI to help organizations detect and report child sexual abuse*  
*material online*, Google (2018), [https://blog.google/around-the-globe/google-europe/using-ai-](https://blog.google/around-the-globe/google-europe/using-ai-help-organizations-detect-and-report-child-sexual-abuse-material-online/)  
26 [help-organizations-detect-and-report-child-sexual-abuse-material-online/](https://blog.google/around-the-globe/google-europe/using-ai-help-organizations-detect-and-report-child-sexual-abuse-material-online/).

27 <sup>866</sup> Nikola Todorovic, *Using AI to help organizations detect and report Child sexual abuse*  
*material online*, Google (2018), [https://blog.google/around-the-globe/google-europe/using-ai-](https://blog.google/around-the-globe/google-europe/using-ai-help-organizations-detect-and-report-child-sexual-abuse-material-online/)  
28 [help-organizations-detect-and-report-child-sexual-abuse-material-online/](https://blog.google/around-the-globe/google-europe/using-ai-help-organizations-detect-and-report-child-sexual-abuse-material-online/).

1 depict obscene visual representations of the sexual abuse of children, or that violate child  
2 pornography laws, each year.

3 798. Google knowingly fails to take adequate and readily available measures to remove  
4 these contraband materials from its product in a timely fashion.

5 799. YouTube is polluted with illegal material that promotes and facilitates the sexual  
6 exploitation of minors, and Google receives value in the form of increased user activity for the  
7 dissemination of these materials on its products.

8 800. Google knows that its product is unsafe for children and yet fails to implement  
9 safeguards to prevent children from accessing its product.

10 801. Further, there is effectively no way for users to report CSAM on Google's YouTube  
11 product. YouTube does not allow users to specifically report any material posted on its product as  
12 CSAM or child pornography.<sup>867</sup>

13 802. YouTube Mobile does not provide any way to report users, including users who share  
14 CSAM on its product. On the desktop, a viewer can report a user, but Google has made the reporting  
15 function difficult to access. Furthermore, reporting requires a viewer to have a Google account and  
16 be logged in to the account to make the report.<sup>868</sup>

17 **6. Google failed to adequately warn Plaintiffs about the harm its products**  
18 **cause or provide instructions regarding safe use.**

19 803. Since YouTube's inception, Google has failed to adequately warn adolescent users  
20 about the physical and mental health risks its product poses. These risks include, but are not limited  
21 to, product abuse, addiction, and compulsive use; sexual exploitation from adult users; dissociative  
22 behavior; damage to body image; social isolation; impaired brain development; and a plethora of  
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25 <sup>867</sup> Canadian Centre for Child Protection, Reviewing Child Sexual Abuse Material Reporting  
26 Functions on Popular Platforms,  
[https://protectchildren.ca/pdfs/C3P\\_ReviewingCSAMMaterialReporting\\_en.pdf](https://protectchildren.ca/pdfs/C3P_ReviewingCSAMMaterialReporting_en.pdf).

27 <sup>868</sup> Canadian Centre for Child Protection, Reviewing Child Sexual Abuse Material Reporting  
28 Functions on Popular Platforms, at 18  
[https://protectchildren.ca/pdfs/C3P\\_ReviewingCSAMMaterialReporting\\_en.pdf](https://protectchildren.ca/pdfs/C3P_ReviewingCSAMMaterialReporting_en.pdf).

1 mental health disorders like body dysmorphia, eating disorders, anxiety, depression, insomnia,  
2 ADD/ADHD exacerbation, suicidal ideation, self-harm, and death.

3 804. Google targets adolescent users via advertising and marketing materials distributed  
4 throughout digital and traditional media products. Its advertising and marketing campaigns fail to  
5 provide adequate warnings to potential adolescent consumers of the physical and mental risks  
6 associated with using YouTube.

7 805. Google further fails to adequately warn adolescents during the product registration  
8 process. At account setup, Google's product contains no warning labels, banners, or conspicuous  
9 messaging to adequately inform adolescent users of the known risks and potential physical and  
10 mental harms associated with usage of its product. Instead, Google allows adolescents to easily  
11 create an account (or multiple accounts), and to access YouTube with or without an account.

12 806. Google's lack of adequate warnings continues once an adolescent uses YouTube.  
13 Google does not adequately inform adolescent users that their data will be tracked, used to help  
14 build a unique algorithmic profile, and potentially sold to Google's advertising clients.

15 807. Google's failure to warn adolescent users continues even as adolescents exhibit  
16 problematic signs of addictive, compulsive use of YouTube. Google does not adequately warn users  
17 when their screen time reaches harmful levels or when adolescents are accessing the product on a  
18 habitual and uncontrolled basis.

19 808. Not only does Google fail to adequately warn users regarding the risks associated  
20 with YouTube, it also does not provide adequate instructions on how adolescents can safely use its  
21 product. A reasonable and responsible company would instruct adolescents on best practices and  
22 safety protocols when using a product known to pose health risks.

23 809. Google also fails to adequately warn users that:

- 24 a. sexual predators use YouTube to produce and distribute CSAM;
- 25 b. adult predators targeting young children for sexual exploitation, sextortion,  
26 and CSAM are prevalent on YouTube;
- 27 c. usage of YouTube can increase the risk of children being targeted and  
28 sexually exploited by adult predators; and,

1 d. usage of YouTube can increase risky and uninhibited behavior in children,  
2 making them easier targets to adult predators for sexual exploitation,  
3 sextortion, and CSAM.

4 810. Google failed to adequately warn parents about all of the foregoing dangers and  
5 harms. Google's failure to adequately warn and instruct as set forth above has proximately caused  
6 significant harm to Plaintiffs' and Consortium Plaintiffs' mental and physical well-being, and other  
7 injuries and harms as set forth herein.

8 **V. TIMELINESS AND TOLLING OF STATUTES OF LIMITATIONS**

9 811. Through the exercise of reasonable diligence, Plaintiffs and Consortium Plaintiffs  
10 did not and could not have discovered that Defendants' products caused their injuries and/or  
11 sequelae thereto because, at the time of these injuries and/or sequelae thereto, the cause was  
12 unknown to Plaintiffs and Consortium Plaintiffs.

13 812. Plaintiffs and Consortium Plaintiffs did not suspect and had no reason to suspect  
14 Defendants' products caused his/her injuries and/or sequelae thereto until less than the applicable  
15 limitations period prior to the filing of this action.

16 813. Due to the highly technical nature of the platforms' features, Plaintiffs and  
17 Consortium Plaintiffs were unable to independently discovery that Defendants' products caused  
18 their injuries and/or sequelae thereto until less than the applicable limitations period prior to the  
19 filing of this action.

20 814. Defendants had exclusive knowledge of the material defects designed and  
21 implemented into their platforms, and they have at all times through the present maintained their  
22 proprietary designs of their platforms' features as strictly confidential.

23 815. In addition, Defendants' fraudulent concealment and/or other tortious conduct has  
24 tolled the running of any statute of limitations.

25 816. Defendants had a duty to disclose dangerous and defective features that cause  
26 foreseeable harm to children and teens.

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1 817. Defendants knowingly, affirmatively, and actively concealed from Plaintiffs and  
2 Consortium Plaintiffs the risks associated with the defects of Defendants' products and that these  
3 products caused their injuries and/or sequelae thereto.

4 818. Defendants committed tortious and/or fraudulent acts that continue to this day. As of  
5 the date of this Complaint, Defendants still have not disclosed, and continue to conceal, that they  
6 designed and implemented dangerous features into their platforms. Despite their knowledge of the  
7 defects and their attendant safety risks, Defendants continue to market their platforms to children  
8 and teens while simultaneously omitting the disclosure of known and foreseeable harms to children  
9 and teens.

10 819. Plaintiffs were unaware and could not have reasonably known or learned through  
11 reasonable diligence that they had been exposed to the defects and risks alleged herein and that those  
12 defects and risks were the direct and proximate result of Defendants' acts and omissions.

13 820. Consortium Plaintiffs were unaware and could not have reasonably known or learned  
14 through reasonable diligence that the harms they suffered were directly and proximately caused by  
15 Defendants' acts and omissions.

16 821. For the foregoing reasons, Defendants are estopped from relying on any statutes of  
17 limitation or repose as a defense in this action. All applicable statutes of limitation and repose have  
18 been tolled by operation of the discovery rule and by Defendants' active concealment with respect  
19 to all claims against Defendants.

20 **VI. PLAINTIFFS' CLAIMS**

21 822. The entirety of this *Complaint* is pled upon information and belief and each allegation  
22 contained herein is likely to have evidentiary support after a reasonable opportunity for further  
23 investigation or discovery.

24 823. Plaintiffs and Consortium Plaintiffs plead all Causes of Action of this *Complaint* in  
25 the broadest sense, pursuant to all laws that may apply under choice-of-law principles, including the  
26 law of the resident states of Plaintiffs and Consortium Plaintiffs. To the extent applicable to specific  
27 Causes of Action, Plaintiffs and Consortium Plaintiffs plead these Causes of Action under all  
28 applicable product liability acts, statutes, and laws of their respective States.

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**COUNT 1:**  
**STRICT LIABILITY – DESIGN DEFECT**  
**(Against All Defendants)**

824. Plaintiffs and Consortium Plaintiffs reallege and incorporate by reference each preceding and succeeding paragraph as though set forth fully at length herein.

825. At all relevant times, each Defendant designed, developed, managed, operated, tested, produced, labeled, marketed, advertised, promoted, controlled, sold, supplied, distributed, and benefitted from its products used by Plaintiffs.

826. These products were designed, manufactured, maintained, controlled and distributed from the respective California headquarters of each defendant.

827. Each product was designed and intended to be social media product. The software and architecture of each social media product is the same for every user that logs on or signs up for an account. These products are uniformly defective and pose the same danger to each minor user.

828. Each of the Defendant’s respective products are distributed and sold to the public through retail channels (i.e., the Apple App “Store” and the Google Play “Store”).

829. Each of the Defendant’s respective products are marketed and advertised to the public for the personal use of the end-user / consumer.

830. Each of the Defendant’s defectively designed its respective products to addict minors and young adults, who were particularly unable to appreciate the risks posed by the products, and particularly susceptible to harms from those products.

831. The defects in the design of each of the Defendant’s respective products existed prior to the release of these products to Plaintiffs and the public, and there was no substantial change to any of the Defendants’ products between the time of their upload by each Defendant to public or retail channels (e.g., the App Store or Google Play) and the time of their distribution to Plaintiffs via download or URL access.

832. Plaintiffs used these products as intended, and each Defendant knew or, by the exercise of reasonable care, should have known that Plaintiffs would use these products without inspection for its addictive nature.

1           833. Each Defendant defectively designed its respective products to take advantage of the  
2 chemical reward system of users' brains (especially young users) to create addictive engagement,  
3 compulsive use, and additional mental and physical harms.

4           834. Each Defendant failed to test the safety of the features it developed and implemented  
5 for use on its respective products. When each Defendant did perform some product testing and had  
6 knowledge of ongoing harm to Plaintiffs, it failed to adequately remedy its respective product's  
7 defects or warn Plaintiffs.

8           835. Each of the Defendant's respective products are defective in design and pose a  
9 substantial likelihood of harm for the reasons set forth herein, because the products fail to meet the  
10 safety expectations of ordinary consumers when used in an intended or reasonably foreseeable  
11 manner, and because the products are less safe than an ordinary consumer would expect when used  
12 in such a manner. Children and teenagers are among the ordinary consumers of each of the  
13 Defendant's products. Indeed, each Defendant markets, promotes, and advertises its respective  
14 products to pre-teen and young consumers. Pre-teen and young consumers, and their parents and  
15 guardians, do not expect Defendants' products to be psychologically and neurologically addictive  
16 when the products are used in its intended manner by its intended audience. They do not expect the  
17 algorithms and other features embedded by each Defendant in its respective products to make them  
18 initially and progressively more stimulative, to maximize young consumers' usage time. They do  
19 not expect each Defendant's revenues and profits to be directly tied to the strength of this addictive  
20 mechanism and dependent on young consumers spending several hours a day using their respective  
21 products.

22           836. Each of the Defendant's respective products are likewise defectively designed in that  
23 it creates an inherent risk of danger; specifically, a risk of abuse, addiction, and compulsive use by  
24 youth which can lead to a cascade of harms. Those harms include but are not limited to dissociative  
25 behavior, withdrawal symptoms, social isolation, damage to body image and self-worth, increased  
26 risky behavior, exposure to predators, sexual exploitation, and profound mental health issues for  
27 young consumers including but not limited to depression, body dysmorphia, anxiety, suicidal  
28 ideation, self-harm, insomnia, eating disorders, death, and other harmful effects.



1           837. The risks inherent in the design of each of the Defendant’s respective products  
2 significantly outweigh any benefit of such design.

3           838. Each of the Defendants could have utilized cost-effective, reasonably feasible  
4 alternative designs including algorithmic changes and changes to the addictive features described  
5 above, to minimize the harms described herein, including, but not limited to:

- 6           a. Robust age verification;
- 7           b. Effective parental controls;
- 8           c. Effective parental notifications;
- 9           d. Warning of health effects of use and extended use upon sign-up;
- 10          e. Default protective limits to the length and frequency of sessions;
- 11          f. Opt-in restrictions to the length and frequency of sessions;
- 12          g. Self-limiting tools, including but not limited to session time notifications,  
13 warnings, or reports;
- 14          h. Blocks to use during certain times of day (such as during school hours or late  
15 at night);
- 16          i. Beginning and end to a user’s “Feed;”
- 17          j. Redesigning algorithms to limit rather than promote addictive engagement;
- 18          k. Implementing labels on images and videos that have been edited through  
19 product features such as “filters;”
- 20          l. Limits on the strategic timing and clustering of notifications to lure back  
21 users;
- 22          m. Removing barriers to the deactivation and deletion of accounts;
- 23          n. Designing products that did not include the defective features listed in this  
24 Complaint while still fulfilling the social networking purposes of a social  
25 media product;
- 26          o. Implementing freely available and industry-proven child protection API tools  
27 such as Project Arachnid Shield to help limit and prevent child sexual  
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- exploitation, sextortion, and distribution of known CSAM through their products;
- p. Implementing reporting protocols to allow users or visitors of Defendants’ products to report CSAM and adult predator accounts specifically without the need to create or log in to the products prior to reporting;
- q. Implementing the legal definition of CSAM under, *e.g.*, Cal. Pen § 311.3 and related case law when scanning for CSAM using tools such as PhotoDNA and CSAI to prevent underreporting of known CSAM;
- r. Prioritizing “tolerance” rather than “efficiency” and “distinctness” of the detection model when using scanning tools such as PhotoDNA and CSAI to prevent underreporting of known CSAM;
- s. Implementing client-side scanning and hashing and/or secure enclaves in the direct messaging features of Meta’s, Snap’s, and ByteDance’s products, to prevent underreporting of known CSAM, and implementing proactive detection measures to scan for known CSAM within all Defendants’ social media products and remove it;
- t. Limiting or eliminating the use of geolocating for minors;
- u. Eliminating product features that recommend minor accounts to adult strangers; and
- v. Others as set forth herein.

839. Alternative designs were available that would reduce minors’ addictive and compulsive engagement with each of the Defendants’ respective products, and which would have served effectively the same purpose of Defendants’ products while reducing the gravity and severity of danger posed by those products’ defects.

840. Plaintiffs used Defendants’ respective products as intended or in reasonably foreseeable ways.

1           841. The physical, emotional, and economic injuries of Plaintiffs and Consortium  
2 Plaintiffs were reasonably foreseeable to each of the Defendants at the time of their respective  
3 products' development, design, advertising, marketing, promotion, and distribution.

4           842. Defendants' respective products were defective and unreasonably dangerous when  
5 they left the Defendants' respective possession and control. The defects continued to exist through  
6 the products' distribution to and use by consumers, including Plaintiffs, who used the products  
7 without any substantial change in the products' condition.

8           843. As manufacturers, designers and seller, defendants had a duty to inform themselves  
9 with the best knowledge of the risks and the defects of their respective products and defendants had  
10 such knowledge. Their victims, injured Plaintiffs and consortium Plaintiffs herein were powerless  
11 to protect themselves against unknown harms, and the defendants should bear the costs of their  
12 injuries.

13           844. Plaintiffs and Consortium Plaintiffs were injured as a direct and proximate result of  
14 each of the Defendant's respective defective designs as described herein. The defective design of  
15 the products used by Plaintiffs was a substantial factor in causing harms to Plaintiffs and Consortium  
16 Plaintiffs.

17           845. As a direct and proximate result of Defendants' respective products' defective  
18 design, Plaintiffs and Consortium Plaintiffs suffered serious and dangerous injuries.

19           846. As a direct and proximate result of Defendants' respective products' defective  
20 design, Plaintiffs and Consortium Plaintiffs require and/or will require more healthcare and services  
21 and did incur medical, health, incidental, and related expenses.

22           847. Plaintiffs and Consortium Plaintiffs were simultaneously injured from the  
23 simultaneous use of the Defendants' defective social media products through no fault of their own.  
24 The fact that there is simultaneous injury to Plaintiffs and Consortium Plaintiffs by the simultaneous  
25 use of Defendants' products means that they are each jointly and severally responsible for the  
26 injuries caused by any one of Defendants' products and the burden shifts to Defendants to identify  
27 alternative causes of the alleged injuries and apportion responsibility for the alleged injuries.

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1 to youth as described herein, including a risk of abuse, addiction, and compulsive use by youth  
2 which can lead to a cascade of harms. Those harms include but are not limited to dissociative  
3 behavior, withdrawal symptoms, social isolation, damage to body image and self-worth, increased  
4 risky behavior, exposure to predators, sexual exploitation, and profound mental health issues for  
5 young consumers including but not limited to depression, body dysmorphia, anxiety, suicidal  
6 ideation, self-harm, insomnia, eating disorders, death, and other harmful effects.

7 857. The Defendants were in the best position to know the dangers their products posed  
8 to consumers, including Plaintiffs and Consortium Plaintiffs herein as they had superior knowledge  
9 of the risks and dangerous posed by their product and had exclusive knowledge of these risks at the  
10 time of development, design, marketing, promotion, advertising and distribution. Defendants had  
11 exclusive control of their respective products at all times relevant to this litigation.

12 858. Each of the Defendant's respective products is dangerous, to an extent beyond that  
13 contemplated by the ordinary user who used Defendants' products, because they encourage  
14 unhealthy, addictive engagement and compulsive use.

15 859. Each Defendant knew or, by the exercise of reasonable care, should have known that  
16 its respective products posed risks of harm to youth considering its own internal data and knowledge  
17 regarding its products at the time of development, design, marketing, promotion, advertising, and  
18 distribution.

19 860. These risks were known and knowable in light of each of the Defendant's own  
20 internal data and knowledge regarding its products at the time of the products' development, design,  
21 marketing, promotion, advertising, and distribution to Plaintiffs.

22 861. Defendants' respective products are defective and unreasonably dangerous because,  
23 among other reasons described herein, each Defendant failed to exercise reasonable care to inform  
24 users that, among other things:

- 25 a. Defendants' respective products cause addiction, compulsive use, and/or  
26 other concomitant physical and mental injuries;

- 1 b. Defendants’ respective products harvest and utilize user data in such a way  
2 that increases a user’s risk of addiction to these products and concomitant  
3 physical and mental injuries;
- 4 c. The algorithmically-targeted feeds in Defendants’ respective products are  
5 designed to promote increasingly stimulative and alarming content to  
6 encourage compulsive engagement by the user, raising the risk of mental  
7 health harms including but not limited to depression, self-harm, and eating  
8 disorders;
- 9 d. Defendants’ respective products include features such as appearance-altering  
10 “filters” that are known to promote negative social comparison, body  
11 dysmorphia, and related injuries among youth by promoting artificial and  
12 unrealistic beauty standards;
- 13 e. New users of Defendants’ respective products can identify themselves as  
14 minors, begin to use the product, and do so indefinitely, without any time or  
15 usage limitations, without ever receiving a safety warning, and without ever  
16 having to provide information so that each Defendant can warn the users’  
17 parents or guardians;
- 18 f. The likelihood and severity of harms is greater for minors and young adults;
- 19 g. The likelihood and intensity of these harmful effects is exacerbated by the  
20 interaction of each product’s features with one another, and by algorithms  
21 and other source code design that is currently publicly unknown and hidden  
22 from the users and the government;
- 23 h. Sexual predators use Defendants’ respective products to produce and  
24 distribute CSAM;
- 25 i. Adult predators target young children for sexual exploitation, sextortion, and  
26 CSAM on Defendants’ respective products, with alarming frequency;
- 27 j. Usage of Defendants’ respective products can increase the risk that children  
28 are targeted and sexually exploited by adult predators;

1 k. Usage of Defendants' respective products can increase risky and uninhibited  
2 behavior in children, making them easier targets to adult predators for sexual  
3 exploitation, sextortion, and CSAM; and

4 l. End-to-end encryption and/or the ephemeral nature of Direct Messaging on  
5 the Meta, ByteDance, and Snap products prevent the reporting of CSAM.

6 862. Ordinary users would not have recognized the potential risks of Defendants'  
7 respective products when used in a manner reasonably foreseeable to each of the Defendants.

8 863. Had Plaintiffs received proper or adequate warnings or instructions as to the risks of  
9 using Defendants' respective products, Plaintiffs would have heeded the warnings and/or followed  
10 the instructions.

11 864. Each of the Defendant's failures to adequately warn Plaintiffs about the risks of its  
12 defective products was a proximate cause and a substantial factor in the injuries sustained by  
13 Plaintiffs and Consortium Plaintiffs.

14 865. Plaintiffs and Consortium Plaintiffs were simultaneously injured from the  
15 simultaneous use of the Defendants' defective social media products through no fault of their own.  
16 The fact that there is simultaneous injury to Plaintiffs and Consortium Plaintiffs by the simultaneous  
17 use of Defendants' products means that they are each jointly and severally responsible for the  
18 injuries caused by any one of Defendants' products and the burden shifts to Defendants to identify  
19 alternative causes of the alleged injuries and apportion responsibility for the alleged injuries.

20 866. The nature of the fraudulent and unlawful acts that created safety concerns for  
21 Plaintiffs are not the type of risks that are immediately apparent from using Defendants' respective  
22 products. Many Plaintiffs are continuing to use Defendants' respective products. When Plaintiffs  
23 use Defendants' respective products, they will not be independently able to verify whether  
24 Defendants' respective products continue to pose an unreasonable risk or rely on Defendants'  
25 respective representations in the future.

26 867. The conduct of each Defendant, as described above, was intentional, fraudulent,  
27 willful, wanton, reckless, malicious, fraudulent, oppressive, extreme, and outrageous, and displayed  
28 an entire want of care and a conscious and depraved indifference to the consequences of its conduct,

1 including to the health, safety, and welfare of their customers, and warrants an award of punitive  
2 damages in an amount sufficient to punish each Defendant and deter others from like conduct.

3 868. Plaintiffs and Consortium Plaintiffs demand judgment against each Defendant for  
4 injunctive relief and for compensatory, treble, and punitive damages, together with interest, costs of  
5 suit, attorneys' fees, and all such other relief as the Court deems proper.

6 **COUNT 3:**  
7 **NEGLIGENCE – DESIGN**  
8 **(Against All Defendants)**

9 869. Plaintiffs and Consortium Plaintiffs reallege and incorporate by reference each  
10 preceding and succeeding paragraph as though set forth fully at length herein.

11 870. At all relevant times, each of the Defendants designed, developed, managed,  
12 operated, tested, produced, labeled, marketed, advertised, promoted, controlled, sold, supplied,  
13 distributed, and benefitted from its respective products used by Plaintiffs.

14 871. These products were designed, manufactured, maintained, controlled and distributed  
15 from the respective California headquarters of each defendant.

16 872. Each of Defendants' respective products was designed and intended to be a social  
17 media product. The software and architecture of each social media product is the same for every  
18 user that logs on or signs up for an account. These products are uniformly defective and pose the  
19 same danger to each minor user.

20 873. Each of the Defendants knew or, by the exercise of reasonable care, should have  
21 known, that its respective products were dangerous, harmful, and injurious when used by youth in  
22 a reasonably foreseeable manner.

23 874. Each Defendant knew or, by the exercise of reasonable care, should have known that  
24 its respective products posed risks of harm to youth. These risks were known and knowable in light  
25 of each of the Defendant's own internal data and knowledge regarding its products at the time of  
26 the products' development, design, marketing, promotion, advertising, and distribution to Plaintiffs.

27 875. Each of the Defendants knew, or by the exercise of reasonable care, should have  
28 known, that ordinary consumers such as Plaintiffs would not have realized the potential risks and  
29 dangers of the Defendants' respective products. Those risks include abuse, addiction, and



1 compulsive use in youth which can lead to a cascade of negative effects including but not limited to  
2 dissociative behavior, withdrawal symptoms, social isolation, damage to body image and self-worth,  
3 increased risky behavior, exposure to predators, sexual exploitation, and profound mental health  
4 issues including but not limited to depression, body dysmorphia, anxiety, suicidal ideation, self-  
5 harm, insomnia, eating disorders, and death.

6 876. Each of the Defendants owed a duty to all reasonably foreseeable users to design a  
7 safe product.

8 877. Each of the Defendants owed a heightened duty of care to minor users of its  
9 respective products because children's brains are not fully developed, resulting in a diminished  
10 capacity to make responsible decisions regarding the frequency and intensity of social media usage.  
11 Children are also more neurologically vulnerable than adults to the addictive aspects of Defendants'  
12 respective products, such as the peer approval that comes from amassing follows and likes.

13 878. Each of the Defendants also owe a particularly heightened duty of care to users under  
14 the age of 16, whose personal information is accorded special. *See, e.g.*, Cal. Civ. Code §  
15 1798.120(c) and other applicable and corresponding state laws.

16 879. Plaintiffs were foreseeable users of the Defendants' respective products.

17 880. Each Defendant knew that minors such as Plaintiffs would use its respective  
18 products.

19 881. Each Defendant breached its respective duty in designing its products.

20 882. Each Defendant breached its respective duty by failing to use reasonable care in the  
21 design of its products by negligently designing them with features and algorithms as described above  
22 that specifically are addictive and harmful to youth, who are particularly unable to appreciate the  
23 risks posed by the products.

24 883. Each Defendant breached its respective duty by designing products that were less  
25 safe to use than an ordinary consumer would expect when used in an intended and reasonably  
26 foreseeable manner.

27 884. Each Defendant breached its respective duty by failing to use reasonable care in the  
28 design of its products by negligently designing its products with features and algorithms as described

1 above that created or increased the risk of abuse and addiction in youth, which can lead to a cascade  
2 of negative effects including but not limited to dissociative behavior, withdrawal symptoms, social  
3 isolation, damage to body image and self-worth, increased risky behavior, exposure to predators,  
4 sexual exploitation, and profound mental health issues including but not limited to depression, body  
5 dysmorphia, anxiety, suicidal ideation, self-harm, insomnia, eating disorders, death, and other  
6 harmful effects.

7       885. Each Defendant breached its respective duty by failing to use reasonable care to use  
8 cost-effective, reasonably feasible alternative designs, including algorithmic changes and changes  
9 to the addictive features described above, and other safety measures, to minimize the harms  
10 described herein. Alternative designs that would reduce the addictive features of Defendants'  
11 respective products were available, would have served effectively the same purpose as each of the  
12 Defendants' defectively designed products, and would have reduced the gravity and severity of  
13 danger Defendants' respective products posed minor Plaintiffs.

14       886. A reasonable company under the same or similar circumstances as each Defendant  
15 would have designed a safer product.

16       887. At all relevant times, Plaintiffs used Defendants' respective products in the manner  
17 in which they were intended by Defendants to be used.

18       888. As a direct and proximate result of each of the Defendants' breached duties, Plaintiffs  
19 and Consortium Plaintiffs were harmed. Defendants' design of their respective products was a  
20 substantial factor in causing the Plaintiffs' and Consortium Plaintiffs' harms and injuries.

21       889. Plaintiffs and Consortium Plaintiffs were simultaneously injured from the  
22 simultaneous use of the Defendants' defective social media products through no fault of their own.  
23 The fact that there is simultaneous injury to Plaintiffs and Consortium Plaintiffs by the simultaneous  
24 use of Defendants' products means that they are each jointly and severally responsible for the  
25 injuries caused by any one of Defendants' products and the burden shifts to Defendants to identify  
26 alternative causes of the alleged injuries and apportion responsibility for the alleged injuries.

27       890. The nature of the fraudulent and unlawful acts that created safety concerns for  
28 Plaintiffs are not the type of risks that are immediately apparent from using Defendants' respective

1 products. Many Plaintiffs are continuing to use Defendants' respective products. When Plaintiffs  
2 use Defendants' respective products, they will not be independently able to verify whether  
3 Defendants' respective products continue to pose an unreasonable risk or rely on Defendants'  
4 respective representations in the future.

5 891. The conduct of each Defendant, as described above, was intentional, fraudulent,  
6 willful, wanton, reckless, malicious, fraudulent, oppressive, extreme, and outrageous, and displayed  
7 an entire want of care and a conscious and depraved indifference to the consequences of its conduct,  
8 including to the health, safety, and welfare of its customers, and warrants an award of punitive  
9 damages in an amount sufficient to punish each Defendant and deter others from like conduct.

10 892. Plaintiffs and Consortium Plaintiffs demand judgment against each Defendant for  
11 injunctive relief and for compensatory, treble, and punitive damages, together with interest, costs of  
12 suit, attorneys' fees, and all such other relief as the Court deems proper.

13 **COUNT 4:**  
14 **NEGLIGENCE – FAILURE TO WARN**  
15 **(Against All Defendants)**

16 893. Plaintiffs and Consortium Plaintiffs reallege and incorporate by reference each  
17 preceding and succeeding paragraph as though set forth fully at length herein.

18 894. At all relevant times, each of the Defendants designed, developed, managed,  
19 operated, tested, produced, labeled, marketed, advertised, promoted, controlled, sold, supplied,  
20 distributed, and benefitted from its respective products used by Plaintiffs.

21 895. Plaintiffs were foreseeable users of Defendants' respective products.

22 896. Each of the Defendants knew, or by the exercise of reasonable care, should have  
23 known, that use of their products was dangerous, harmful, and injurious when used in a reasonably  
24 foreseeable manner, particularly by youth.

25 897. Each of the Defendants knew, or by the exercise of reasonable care, should have  
26 known, that ordinary consumers such as Plaintiffs would not have realized the potential risks and  
27 dangers of the Defendants' products including a risk of abuse, addiction, and compulsive use by  
28 youth which can lead to a cascade of negative effects including but not limited to dissociative  
behavior, withdrawal symptoms, social isolation, damage to body image and self-worth, and

1 profound mental health issues including but not limited to depression, body dysmorphia, anxiety,  
2 suicidal ideation, self-harm, insomnia, eating disorders, and death.

3 898. Had Plaintiffs received proper or adequate warnings or directions as the risks of  
4 Defendants' respective products, Plaintiffs would have heeded such warnings and/or directions.

5 899. Each of the Defendants knew or, by the exercise of reasonable care, should have  
6 known that its products posed risks of harm to youth. These risks were known and knowable in light  
7 of each of the Defendant's own internal data and knowledge regarding its products at the time of  
8 development, design, marketing, promotion, advertising and distribution to Plaintiffs.

9 900. Each of the Defendants owed a duty to all reasonably foreseeable users, including  
10 but not limited to minor users and their parents, to provide adequate warnings about the risk of using  
11 Defendants' respective products that were known to each of the Defendants, or that each of the  
12 Defendants should have known through the exercise of reasonable care.

13 901. Each of the Defendants owed a heightened duty of care to minor users and their  
14 parents to warn about its products' risks because adolescent brains are not fully developed, resulting  
15 in a diminished capacity to make responsible decisions regarding the frequency and intensity of  
16 social media usage. Children are also more neurologically vulnerable than adults to the addictive  
17 aspects of Defendants' respective products, including but not limited to the "flow state" created by  
18 an endless feed and the public social validation created by follows and likes.

19 902. Each of the Defendants also owe a particularly heightened duty of care to users under  
20 the age of 16, whose personal information is accorded special protections under California law. *See,*  
21 *e.g.,* Cal. Civ. Code § 1798.120(c), and other applicable and corresponding state laws.

22 903. Each Defendant breached its duty by failing to use reasonable care in providing  
23 adequate warnings to Plaintiffs and Consortium Plaintiffs, as set forth above.

24 904. A reasonable company under the same or similar circumstances as Defendants would  
25 have used reasonable care to provide adequate warnings to consumers, including the parents of  
26 minor users, as described herein.

27 905. At all relevant times, each Defendant could have provided adequate warnings to  
28 prevent the harms and injuries described herein.

1           906. As a direct and proximate result of each Defendant's breach of its respective duty to  
2 provide adequate warnings, Plaintiffs and Consortium Plaintiffs were harmed and sustained the  
3 injuries set forth herein. Each of the Defendants' failure to provide adequate and sufficient warnings  
4 was a substantial factor in causing the harms to Plaintiffs and Consortium Plaintiffs.

5           907. As a direct and proximate result of each of the Defendants' failure to warn, Plaintiffs  
6 and Consortium Plaintiffs require and/or will require more healthcare and services and did incur  
7 medical, health, incidental, and related expenses.

8           908. Plaintiffs and Consortium Plaintiffs were simultaneously injured from the  
9 simultaneous use of the Defendants' defective social media products through no fault of their own.  
10 The fact that there is simultaneous injury to Plaintiffs and Consortium Plaintiffs by the simultaneous  
11 use of Defendants' products means that they are each jointly and severally responsible for the  
12 injuries caused by any one of Defendants' products and the burden shifts to Defendants to identify  
13 alternative causes of the alleged injuries and apportion responsibility for the alleged injuries.

14           909. The nature of the fraudulent and unlawful acts that created safety concerns for  
15 Plaintiffs are not the type of risks that are immediately apparent from using Defendants' respective  
16 products. Many Plaintiffs are continuing to use Defendants' respective products. When Plaintiffs  
17 use Defendants' respective products, they will not be independently able to verify whether  
18 Defendants' respective products continue to pose an unreasonable risk or rely on Defendants'  
19 respective representations in the future.

20           910. The conduct of each Defendant, as described above, was intentional, fraudulent,  
21 willful, wanton, reckless, malicious, fraudulent, oppressive, extreme, and outrageous, and displayed  
22 an entire want of care and a conscious and depraved indifference to the consequences of its conduct,  
23 including to the health, safety, and welfare of their customers, and warrants an award of punitive  
24 damages in an amount sufficient to punish each Defendant and deter others from like conduct.

25           911. Plaintiffs and Consortium Plaintiffs demand judgment against each Defendant for  
26 injunctive relief and for compensatory, treble, and punitive damages, together with interest, costs of  
27 suit, attorneys' fees, and all such other relief as the Court deems proper.

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**COUNT 5:  
NEGLIGENCE  
(Against All Defendants)**

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3       912. Plaintiffs and Consortium Plaintiffs reallege and incorporate by reference each  
4 preceding and succeeding paragraph as though set forth fully at length herein.

5       913. At all relevant times, each Defendant developed, set up, managed, maintained,  
6 operated, marketed, advertised, promoted, supervised, controlled, and benefitted from its respective  
7 platforms used by Plaintiffs.

8       914. Each Defendant owed Plaintiffs a duty to exercise reasonable care in the  
9 development, setup, management, maintenance, operation, marketing, advertising, promotion,  
10 supervision, and control of its respective platforms not to create an unreasonable risk of harm from  
11 and in the use of its platforms (including an unreasonable risk of addiction, compulsive use, sleep  
12 deprivation, anxiety, depression, or other physical or mental injuries); to protect Plaintiffs from  
13 unreasonable risk of injury from and in the use of its platforms; and not to invite, encourage, or  
14 facilitate youth, such as Plaintiffs, to foreseeably engage in dangerous or risky behavior through,  
15 on, or as a reasonably foreseeable result of using its platforms. These duties govern Defendants'  
16 own specific actions and are based on direct actions Defendants took in developing their respective  
17 Products and features.

18       915. In addition, each Defendant owed a special relationship duty to Plaintiffs to protect  
19 them against harm caused by its platforms and employees or by other users. This special relationship  
20 duty is based on the following:

- 21           a. As businesses, Defendants owe a duty to protect customers against  
22               reasonably foreseeable criminal acts of third parties and other dangers known  
23               to Defendants on their platforms.
- 24           b. Plaintiffs are comparatively vulnerable and dependent on Defendants for a  
25               safe environment on their platforms, and Defendants have a superior ability  
26               and control to provide that safety with respect to activities that they sponsor  
27               or control.

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- c. Plaintiffs rely upon Defendants to for protection against third party misuse or misconduct.
- d. The special relationship Plaintiffs have with Defendants substantially benefits Defendants through profits and growth in users and user activity. Defendants could not successfully operate without the growth in users and user activity generated by children.
- e. Defendants are far more to Plaintiffs than a business. Defendants provide Plaintiffs with opportunities for social interaction. Defendants provide Plaintiffs with a discrete community for their users. Plaintiffs are dependent on Defendants to provide structure, guidance, and a safe communication environment.
- f. Defendants have superior control over their platform environments and the ability to protect their users. Defendants impose a variety of rules and restrictions to maintain a safe and orderly platform. Defendants employ internal staff to enforce these rules and restrictions and can monitor and discipline users when necessary. Defendants have the power to influence Plaintiffs’ values, their consciousness, their relationships, and their behaviors.
- g. Defendants have created platforms which through advertisements are directed to minor participants, creating a special duty to exercise reasonable care to protect the minors from foreseeable harm while the minors are on the platforms.
- h. Defendants have voluntarily undertaken a responsibility to keep children safe on their platforms. As alleged above, each of the Defendants has publicly stated that it takes steps to keep children safe on their platforms and therefore has undertaken a duty to act reasonably in taking such steps.

1           916. Each of the Defendants were responsible not only for the result of their willful acts,  
2 but also for injuries occasioned to Plaintiffs by Defendants want of ordinary care and/or skill in the  
3 management of their property. *See, e.g.*, Cal. Civ. Code § 1714.

4           917. Plaintiffs were foreseeable users of the Defendants’ respective platform(s).

5           918. Each Defendant knew that minors such as Plaintiffs would use their respective  
6 platform(s).

7           919. Each Defendant invited, solicited, encouraged, or reasonably should have foreseen  
8 the fact, extent, and manner of Plaintiffs’ use of Defendants’ respective platform(s).

9           920. Each Defendant knew or, by the exercise of reasonable care, should have known, that  
10 the reasonably foreseeable use of its respective platforms (as developed, set up, managed,  
11 maintained, supervised, and operated by that Defendant) was dangerous, harmful, and injurious  
12 when used by youth such as Plaintiffs in a reasonably foreseeable manner.

13           921. At all relevant times, each Defendant knew or, by the exercise of reasonable care,  
14 should have known that its respective platforms (as developed, setup, managed, maintained,  
15 supervised, and operated by that Defendant) posed unreasonable risks of harm to youth such as  
16 Plaintiffs, which risks were known and knowable, including in light of the internal data and  
17 knowledge each Defendant had regarding its platforms.

18           922. Each Defendant knew, or by the exercise of reasonable care, should have known, that  
19 ordinary youth users of its respective platforms, such as Plaintiffs, would not have realized the  
20 potential risks and dangers of using the platform, including a risk of addiction, compulsive use, or  
21 excessive use, which foreseeably can lead to a cascade of negative effects, including but not limited  
22 to dissociative behavior, withdrawal symptoms, social isolation, damage to body image and self-  
23 worth, increased risk behavior, exposure to predators, sexual exploitation and profound mental  
24 health issues for young consumers including but not limited to depression, body dysmorphia,  
25 anxiety, suicidal ideation, self-harm, insomnia, eating disorders, and death.

26           923. Each Defendant’s conduct was closely connected to Plaintiffs’ injuries, which were  
27 highly certain to occur, as evidenced by the significance of Plaintiffs’ injuries.

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1           924. Each Defendant could have avoided Plaintiffs' injuries with minimal cost, including,  
2 for example, by not including certain features and algorithms in its respective platforms which  
3 harmed Plaintiffs.

4           925. Imposing a duty on Defendants would benefit the community at large.

5           926. Imposing a duty on Defendants would not be burdensome to them because they have  
6 the technological and financial means to avoid the risks of harm to Plaintiffs.

7           927. Each Defendant owed a heightened duty of care to youth users of their respective  
8 platforms because the child brain is not fully developed, meaning young people are more  
9 neurologically vulnerable than adults to the addictive and other harmful aspects of Defendants'  
10 respective platforms, and meaning young people have a diminished capacity to make responsible  
11 decisions regarding the frequency, intensity, and manner of their use of Defendants' respective  
12 platforms.

13           928. Each of the Defendants also owe a particularly heightened duty of care to users under  
14 the age of 16, whose personal information is accorded special protections under California law. *See,*  
15 *e.g.,* Cal. Civ. Code § 1798.120(c), and other applicable and corresponding state laws.

16           929. Each Defendant has breached its duties of care owed to Plaintiffs through its  
17 affirmative malfeasance, actions, business decisions, and policies in the development, setup,  
18 management, maintenance, operation, marketing, advertising, promotion, supervision, and control  
19 of its respective platforms. These breaches are based on Defendants' own actions in managing their  
20 own property made available to the public, independent of any actions taken by a third party. Those  
21 breaches include:

- 22           a. Including features and algorithms in their respective platforms that, as  
23               described above, are currently structured and operated in a manner that  
24               unreasonably creates or increases the foreseeable risk of addiction to,  
25               compulsive use of, or overuse of the platform by youth, including Plaintiffs;
- 26           b. Including features and algorithms in their respective platforms that, as  
27               described above, are currently structured and operated in a manner that  
28               unreasonably creates or increases the foreseeable risk of harm to the physical

1 and mental health and well-being of youth users, including Plaintiffs,  
2 including but not limited to dissociative behavior, withdrawal symptoms,  
3 social isolation, depression, anxiety, suicide and suicidal ideation, body  
4 dysmorphia, self-harm, sleep deprivation, insomnia, eating disorders, and  
5 death;

6 c. Including features and algorithms in their respective platforms that, as  
7 described above, are currently structured and operated in a manner that  
8 unreasonably exposes youth users to sexual predators and sexual exploitation,  
9 including features that recommend or encourage youth users to connect with  
10 adult strangers on or through the platform;

11 d. Maintaining unreasonably dangerous features and algorithms in their  
12 respective platforms after notice that such features and algorithms, as  
13 structured and operated, posed a foreseeable risk of harm to the physical and  
14 mental health and well-being of youth users;

15 e. Facilitating use of their respective platforms by youth under the age of 13,  
16 including by adopting protocols that do not ask for or verify the age or  
17 identity of users or by adopting ineffective age and identity verification  
18 protocols; and

19 f. Facilitating unsupervised and/or hidden use of their respective platforms by  
20 youth, including by adopting protocols that allow youth users to create  
21 multiple and private accounts and by offering features that allow youth users  
22 to delete, hide, or mask their usage.

23 930. Each Defendant has breached its duties of care owed to Plaintiffs through its non-  
24 feasance, failure to act, and omissions in the development, setup, management, maintenance,  
25 operation, marketing, advertising, promotion, supervision, and control of its respective platforms.  
26 These breaches are based on Defendants' own actions in managing their own property made  
27 available to the public, independent of any actions taken by a third party. Those breaches include:

28 a. Failing to implement effective protocols to block users under the age of 13;

- 1           b.     Failing to implement effective protocols to prevent the collecting, sharing,  
2                     and selling of the personal information of minor users under the age of 16  
3                     without prior affirmative authorization;
- 4           c.     Failing to implement effective parental controls;
- 5           d.     Failing to implement reasonably available means to monitor for and limit or  
6                     deter excessive frequency or duration of use of platforms by youth, including  
7                     patterns, frequency, or duration of use that are indicative of addiction,  
8                     compulsive use, or overuse;
- 9           e.     Failing to implement reasonably available means to limit or deter use of  
10                    platforms by youth during ordinary times for school or sleep;
- 11          f.     Failing to implement reasonably available means to set up and operate its  
12                     platforms without algorithms and features, discussed above, that rely on  
13                     unreasonably dangerous methods (such as endless scroll, autoplay, IVR,  
14                     social comparison, and others) as a means to engage youth users;
- 15          g.     Failing to set up, monitor, and modify the algorithms used on their platforms  
16                     to prevent the platforms from actively driving youth users into unsafe,  
17                     distorted, and unhealthy online experiences, including highly sexualized,  
18                     violent, and predatory environments and environments promoting eating  
19                     disorders and suicide;
- 20          h.     Failing to implement reasonably available means to monitor for, report, and  
21                     prevent the use of their platforms by sexual predators to victimize, abuse, and  
22                     exploit youth users; and
- 23          i.     Failing to provide effective mechanisms for youth users and their  
24                     parents/guardians to report abuse or misuse of the platforms.

25           931.   A reasonable company under the same or similar circumstances as each Defendant  
26                    would have developed, set up, managed, maintained, supervised, and operated its platforms in a  
27                    manner that is safer for and more protective of youth users like Plaintiffs.

1           932. At all relevant times, Plaintiffs used one or more of the Defendants' respective  
2 platforms in the manner in which they were intended to be used.

3           933. As a direct and proximate result of each Defendant's breach of one or more of its  
4 duties, Plaintiffs and Consortium Plaintiffs were harmed. Such harms include addiction to, or  
5 compulsive or excessive use of, Defendants' platforms, and cascade of resulting negative effects,  
6 including but not limited to dissociative behavior, withdrawal symptoms, social isolation, damage  
7 to body image and self-worth, increased risky behavior, exposure to predators, sexual exploitation  
8 and profound mental health issues including but not limited to depression, body dysmorphia,  
9 anxiety, suicidal ideation, self-harm, insomnia, eating disorders, and death.

10          934. Each Defendant's breach of one or more of its duties was a substantial factor in  
11 causing harms and injuries to the Plaintiffs and Consortium Plaintiffs.

12          935. Plaintiffs and Consortium Plaintiffs were simultaneously injured from the  
13 simultaneous use of the Defendants' defective social media products through no fault of their own.  
14 The fact that there is simultaneous injury to Plaintiffs and Consortium Plaintiffs by the simultaneous  
15 use of Defendants' products means that they are each jointly and severally responsible for the  
16 injuries caused by any one of Defendants' products and the burden shifts to Defendants to identify  
17 alternative causes of the alleged injuries and apportion responsibility for the alleged injuries.

18          936. The nature of the fraudulent and unlawful acts that created safety concerns for  
19 Plaintiffs are not the type of risks that are immediately apparent from using Defendants' respective  
20 products. Many Plaintiffs are continuing to use Defendants' respective products. When Plaintiffs  
21 use Defendants' respective products, they will not be independently able to verify whether  
22 Defendants' respective products continue to pose an unreasonable risk or rely on Defendants'  
23 respective representations in the future.

24          937. Each Defendant's conduct, as described above, was intentional, fraudulent, willful,  
25 wanton, reckless, malicious, fraudulent, oppressive, extreme, and outrageous, and displayed an  
26 entire want of care and a conscious and depraved indifference to the consequences of their conduct,  
27 including to the health, safety, and welfare of their customers, and warrants an award of punitive  
28 damages in an amount sufficient to punish the Defendants and deter others from like conduct.

1 938. Plaintiffs and Consortium Plaintiffs demand judgment against each Defendant for  
2 injunctive relief and for compensatory, treble, and punitive damages, together with interest, costs of  
3 suit, attorneys' fees, and all such other relief as the Court deems proper.

4 **COUNT 6:**  
5 **NEGLIGENT UNDERTAKING**  
6 **(Against All Defendants)**

7 939. Plaintiffs and Consortium Plaintiffs reallege and incorporate by reference each  
8 preceding and succeeding paragraph as though set forth fully at length herein.

9 940. Each Defendant rendered age verification services to Plaintiffs.

10 941. Each Defendant should have recognized that effective age verification services were  
11 needed for the protection of both pre-teen Plaintiffs (those under the age of 13)) and teen Plaintiffs  
12 (those under the age of 16) under applicable federal, California and other similar and applicable  
13 state statutes.

14 942. Each Defendant's conduct was closely connected to Plaintiffs' injuries, which were  
15 highly certain to occur, as evidenced by the significance of Plaintiffs' injuries.

16 943. Each Defendant could have avoided Plaintiffs' injuries with minimal cost, including,  
17 for example, by implementing age verification services that were effective and would prevent access  
18 by pre-teen users of their products.

19 944. Imposing a duty on Defendants would benefit the community at large.

20 945. Imposing a duty on Defendants would not be burdensome to them because they have  
21 the technological and financial means to avoid the risks of harm to Plaintiffs.

22 946. Each Defendant owed a heightened duty of care to minor users and their parents to  
23 implement age verification services that were effective and would prevent access by pre-teen users  
24 of their products.

25 947. Plaintiffs relied on each of the Defendants exercising reasonable care in undertaking  
26 to render age verification services.

27 948. Each Defendant breached its duty of undertaking by failing to use reasonable care in  
28 rendering its age verification services to prevent access by pre-teen users of its respective platforms.

1           949. Each Defendant failed to exercise reasonable care in rendering these age verification  
2 services.

3           950. Each Defendant's failure to exercise reasonable care increased the risk of, and was a  
4 substantial factor in causing, harm to pre-teen Plaintiffs and Consortium Plaintiffs who are the  
5 parents, guardians, spouses, children, siblings, close family members, and/or personal or estate  
6 representatives or pre-teen users of Defendants' respective platforms.

7           951. Each Defendant's failure to exercise reasonable care added to the risk of harm.

8           952. Plaintiffs and Consortium Plaintiffs were simultaneously injured from the  
9 simultaneous use of the Defendants' defective social media products through no fault of their own.  
10 The fact that there is simultaneous injury to Plaintiffs and Consortium Plaintiffs by the simultaneous  
11 use of Defendants' products means that they are each jointly and severally responsible for the  
12 injuries caused by any one of Defendants' products and the burden shifts to Defendants to identify  
13 alternative causes of the alleged injuries and apportion responsibility for the alleged injuries.

14           953. The nature of the fraudulent and unlawful acts that created safety concerns for  
15 Plaintiffs are not the type of risks that are immediately apparent from using Defendants' respective  
16 products. Many Plaintiffs are continuing to use Defendants' respective products. When Plaintiffs  
17 use Defendants' respective products, they will not be independently able to verify whether  
18 Defendants' respective products continue to pose an unreasonable risk or rely on Defendants'  
19 respective representations in the future.

20           954. The conduct of each Defendant, as described above, was intentional, fraudulent,  
21 willful, wanton, reckless, malicious, fraudulent, oppressive, extreme, and outrageous, and displayed  
22 an entire want of care and a conscious and depraved indifference to the consequences of their  
23 conduct, including to the health, safety, and welfare of its customers, and warrants an award of  
24 punitive damages in an amount sufficient to punish each Defendant and deter others from like  
25 conduct.

26           955. Plaintiffs and Consortium Plaintiffs demand judgment against each Defendant for  
27 injunctive relief and for compensatory, treble, and punitive damages, together with interest, costs of  
28 suit, attorneys' fees, and all such other relief as the Court deems proper.

1 **COUNT 7:**  
2 **FRAUDULENT CONCEALMENT AND MISREPRESENTATION**  
3 **(Against the Meta Defendants Only)**

4 956. Plaintiffs and Consortium Plaintiffs re-allege and incorporate by reference each  
5 preceding and succeeding paragraph as though set forth fully at length herein.

6 957. This claim is brought against Meta.

7 958. As set forth in more detail above, Meta knew about the defective condition of  
8 Instagram and Facebook and that the products posed serious health risks to users.

9 959. Meta was under a duty to tell the public the truth and to disclose the defective  
10 condition of Instagram and Facebook and that the products posed serious health risks to users,  
11 particularly youth.

12 960. Meta breached its duty to the public, users, and their parents, including Plaintiffs and  
13 Consortium Plaintiffs, by concealing, failing to disclose, and making misstatements about the  
14 serious safety risks presented by Instagram and Facebook. Even though Meta knew of those risks  
15 based on Meta's internal studies, external studies known to Meta, and information conveyed by at  
16 least one scientific expert directly to Mark Zuckerberg, it intentionally concealed those findings, in  
17 order not to lose users and advertising revenue, and to induce youth, including Plaintiffs, to continue  
18 using Instagram and Facebook.

19 961. Meta made numerous partial material representations downplaying any potential  
20 harm associated with Instagram and Facebook and reassuring the public, Congress, and parents,  
21 including Plaintiffs and Consortium Plaintiffs, that its products, Instagram and Facebook, were safe,  
22 including but not limited to:

23 (a) public statements regarding product development that assured users of the  
24 products safety, such as its announcement of a Youth Portal, which it purported  
25 helped teens "stay[ ] safe."<sup>869</sup>  
26

27 <sup>869</sup> *The Facebook Youth Portal and Our Ongoing Work With Teens*, Meta (May 14, 2018),  
28 <https://about.fb.com/news/2018/05/the-facebook-youth-portal-and-our-ongoing-work-with-teens/>.

1 (b) statements in congressional hearing asserting that Facebook had adequate  
2 safeguards to protect youth online, such as Mark Zuckerberg’s statements that “A.I.  
3 tools [ ] can proactively police and enforce safety across the community. . . . I think  
4 Facebook is safe. I use it, my family uses it, and all the people I love and care about  
5 use it all the time. These controls are not just to make people feel safe; it's actually  
6 what people want in the product.”<sup>870</sup>

7 (c) statements in conversations with public officials asserting the products were safe:

8 i. Zuckerberg (3/25/2011): “So, we’re really focused on, on safety,  
9 especially children’s safety. So we’re having folks under the age of 18, um  
10 we, we just take a lot of extra precautions for it, to make sure that it’s just a  
11 safe environment for them um, to use this service that you know, the default  
12 for, for people sharing things isn’t that they’re sharing with everyone but that  
13 they’re sharing with a smaller community . . . But I think, I think that’s a lot  
14 of it. We really try to build a safe environment. Um, and um, that’s gonna be  
15 the key long term.”<sup>871</sup>

16 ii. Zuckerberg (3/25/2011): “Right, and they, they feel like Facebook is  
17 this really secure place and that it’s a hundred percent safe, and um, we’re  
18 always thinking about little and big things like that that we can do to keep it  
19 safe for, for the people who use our service.”<sup>872</sup>

20 iii. Zuckerberg (5/25/2011): “I mean, we do not allow people under the  
21 age of 13 to sign up and I think if we ever were, we would need to try to  
22

23 \_\_\_\_\_  
24 <sup>870</sup> Bloomberg Government, Transcript of Mark Zuckerberg’s Senate Hearing, Washington Post  
25 (Apr. 10, 2018), <https://www.washingtonpost.com/news/the-switch/wp/2018/04/10/transcript-of-mark-zuckerbergs-senate-hearing/>.

26 <sup>871</sup> Mark Zuckerberg at BYU with Senator Orrin Hatch, YouTube, March 25, 2011,  
27 <http://www.youtube.com/watch?v=zRsbWommvNo>.

28 <sup>872</sup> Mark Zuckerberg at BYU with Senator Orrin Hatch, YouTube, March 25, 2011,  
<http://www.youtube.com/watch?v=zRsbWommvNo>.



1 figure out a lot of ways to make sure that they were safe, right, because that's  
2 just extremely important and that's just not the top of the list in terms of things  
3 for us to figure out right now.”<sup>873</sup>

4 (d) statements that the core mission and impact of Meta's products on users is to  
5 “Giv[e] people the power to build community and bring the world closer  
6 together[.]”<sup>874</sup>

7 962. Meta's representations regarding the safety of Instagram and Facebook were false,  
8 and Meta knew that its representations about the safety of Instagram and Facebook were false when  
9 the statements were made.

10 963. Meta intentionally failed to disclose the serious safety risks posed by the design of  
11 Instagram and Facebook to the public, users, and their parents, including Plaintiffs and Consortium  
12 Plaintiffs. Such risks were known only to Meta through its internal studies and external studies  
13 known to Meta, and the public, users, and their parents, including Plaintiffs and Consortium  
14 Plaintiffs could not have discovered such serious safety risks.

15 964. The public, users, and their parents, including Plaintiffs and Consortium Plaintiffs,  
16 did not know of the serious safety risks posed by the design of Instagram and Facebook which were  
17 known by Meta.

18 965. By intentionally concealing and failing to disclose defects inherent in the design of  
19 Instagram and Facebook, Meta knowingly and recklessly misled the public, users, and their parents,  
20 including Plaintiffs and Consortium Plaintiffs, into believing these products were safe for children  
21 to use.

22 966. By intentionally making numerous partial material representations, downplaying any  
23 potential harm associated with Instagram and Facebook, and reassuring the public, Congress, and  
24 parents, including Plaintiffs and Consortium Plaintiffs, that it was safe, Meta fraudulently misled  
25

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26 <sup>873</sup> Mark Zuckerberg at BYU with Senator Orrin Hatch, YouTube, March 25, 2011,  
27 <http://www.youtube.com/watch?v=zRsbW0mmvNo>.

28 <sup>874</sup> Meta, Mission Statement, Meta, <https://about.meta.com/company-info/>.

1 the public, users, and their parents, including Plaintiffs and Consortium Plaintiffs, into believing  
2 Instagram and Facebook were safe for children to use.

3 967. Meta intended for public, users, and their parents, including Plaintiffs and  
4 Consortium Plaintiffs, to rely on its representations about the safety of Instagram and Facebook.

5 968. Meta knew that its concealment, misstatements, and omissions were material. A  
6 reasonable person, including Plaintiffs and Consortium Plaintiffs, would find information that  
7 impacted the users' health, safety, and well-being, such as serious adverse health risks associated  
8 with the use of Instagram and Facebook, to be important when deciding whether to use, or continue  
9 to use, those products.

10 969. The public, users, and their parents, including Plaintiffs and Consortium Plaintiffs,  
11 reasonably relied on the representations made by Meta about the safety of Instagram and Facebook  
12 for use by children.

13 970. Meta intended to deceive the public, users, and their parents, including Plaintiffs and  
14 Consortium Plaintiffs, by concealing the defects in the design of Instagram and Facebook which  
15 made the products unsafe.

16 971. As a direct and proximate result of Meta's material omissions, misrepresentations,  
17 and concealment of material information, Plaintiffs and Consortium Plaintiffs were not aware and  
18 could not have been aware of the facts that Meta concealed or misstated, and therefore justifiably  
19 and reasonably believed that Instagram and Facebook were safe for children to use.

20 972. If the serious safety risks presented by the design of Instagram and Facebook had  
21 been disclosed, the public, users, and their parents, including Plaintiffs and Consortium Plaintiffs,  
22 reasonably would have acted differently and/or would have ceased use of Instagram and Facebook.

23 973. As a direct and proximate result of Meta's material omissions, misrepresentations,  
24 and concealment of material information, Plaintiffs and Consortium Plaintiffs sustained serious  
25 injuries and harm.

26 974. Meta's concealment and Plaintiffs' and Consortium Plaintiffs' reliance on Meta's  
27 representations about the safety of Instagram and Facebook were substantial factors in causing harm  
28 to Plaintiffs and Consortium Plaintiffs.



1 concealed those findings, in order not to lose users and advertising revenue, and to induce children,  
2 including Plaintiffs, to continue using its products. Worse still, Meta negligently made numerous  
3 partial material representations downplaying any potential harm associated with its products and  
4 reassuring the public and parents its products were safe.

5 983. Meta made numerous partial material representations downplaying any potential  
6 harm associated with Instagram and Facebook and reassuring the public, Congress, and parents,  
7 including Plaintiffs and Consortium Plaintiffs, that its products, Instagram and Facebook, were safe.

8 984. Meta's representations that Instagram and Facebook were safe for use by children  
9 was not true.

10 985. Meta had no reasonable grounds for believing its representations that Instagram and  
11 Facebook were safe for use by children were true.

12 986. By concealing and failing to disclose, or taking reasonable care to disclose the  
13 defects, Meta negligently misled users and their parents, including Plaintiffs and Consortium  
14 Plaintiffs, into believing Instagram and Facebook were safe for children to use.

15 987. By making numerous partial material representations downplaying any potential  
16 harm associated with its products and reassuring the public, Congress, and parents, including  
17 Plaintiffs and Consortium Plaintiffs, that its products were safe, Meta negligently misled the public  
18 users and their parents, including Plaintiffs and Consortium Plaintiffs, into believing Meta's  
19 products were safe for use.

20 988. As a direct and proximate result of Meta's material omissions, misrepresentations,  
21 and concealment of material information, Plaintiffs and Consortium Plaintiffs were not aware and  
22 could not have been aware of the facts that Meta concealed or misstated, and therefore justifiably  
23 and reasonably believed that Instagram and Facebook were safe for use.

24 989. As a direct and proximate result of Meta's material omissions, misrepresentations,  
25 and concealment of material information, Plaintiffs and Consortium Plaintiffs sustained serious  
26 injuries and harm.

27  
28

1 990. Meta’s concealment and Plaintiffs’ and Consortium Plaintiffs’ reliance on Meta’s  
2 representations about the safety of Instagram and Facebook were substantial factors in causing harm  
3 to Plaintiffs and Consortium Plaintiffs.

4 991. Meta’s conduct, as described above, was intentional, fraudulent, willful, wanton,  
5 reckless, malicious, fraudulent, oppressive, extreme, and outrageous, and displayed an entire want  
6 of care and a conscious and depraved indifference to the consequences of its conduct, including to  
7 the health, safety, and welfare of their customers, and warrants an award of punitive damages in an  
8 amount sufficient to punish them and deter others from like conduct.

9 992. Plaintiffs and Consortium Plaintiffs demand judgment against Meta for  
10 compensatory, treble, and punitive damages, together with interest, costs of suit, attorneys’ fees, and  
11 all such other relief as the Court deems proper.

12 **COUNT: 9**  
13 **NEGLIGENCE PER SE**  
14 **(Against All Defendants)**

15 993. Plaintiffs and Consortium Plaintiffs re-allege and incorporate by reference each  
16 preceding and succeeding paragraph as though set forth fully at length herein.

17 994. At all times, each of the Defendants had an obligation to comply with applicable  
18 statutes and regulations, including but not limited to the California Consumer Privacy Act of 2018  
19 (“CCPA”) (*see, e.g.*, Cal. Civ. Code § 1798.120), as well as other similar state laws.

20 995. Each of the Defendants owed a heightened duty of care to minor users and their  
21 parents to implement age verification services that were effective and would prevent access by pre-  
22 teen users of its respective products.

23 996. Each of the Defendants owed a heightened duty of care to minor users and their  
24 parents to implement age verification services that were effective and would require affirmative  
25 authorization from minor users under the age of 16 prior to the sale or sharing of said minor users’  
26 personal information.

27 997. Defendants willfully disregarded the actual age of their minor users.

28 998. Certain obligations are established for businesses that are intended to inform parents,  
guardians, and teens about the collecting, selling, and sharing of minors’ personal information (*see,*

1 e.g., CCPA’s Consumers’ Right to Opt Out of Sale or Sharing of Personal Information (Cal. Civ.  
2 Code § 1798.120(c)) and other similar and applicable state statutes).

3 999. Each Defendant is a “business,” as defined by, e.g., Cal. Civ. Code § 1798.140(d).

4 1000. Each Defendant has collected and shared and/or sold personal information from  
5 children younger than age 16 without obtaining prior affirmative authorization from minor users or  
6 their parents (for minor users under 13) in violation of, e.g., Cal. Civ. Code § 1798.120(c).

7 1001. By collecting, sharing, and selling the personal information of minor users under the  
8 age of 16 without prior affirmative authorization, each Defendant has allowed harmful targeted  
9 advertising toward these minor users.

10 1002. Each of the Defendants collects, uses, and shares personal information from children  
11 under the age of 16 through its respective websites or online services that are directed to (or that  
12 each Defendant has actual knowledge were used by) children. Each Defendant has actual knowledge  
13 that it collects and shares personal information directly from users of its respective websites or  
14 online services.

15 1003. Plaintiffs are within the class of persons that these statutes and regulations are  
16 intended to protect. This includes Plaintiffs who, as minors who use the Internet, are within the  
17 scope of persons CCPA is intended to protect.

18 1004. Plaintiffs’ injuries and/or symptoms are the type of harm that these statutes and  
19 regulations are intended to prevent.

20 1005. Violations of the foregoing statutes and regulations, among others, by each  
21 Defendant constitutes negligence *per se*.

22 1006. As a direct and proximate result of each of the Defendant’s respective statutory and  
23 regulatory violations, Plaintiffs and Consortium Plaintiffs suffered serious injuries and/or sequelae  
24 thereto, including but not limited to emotional distress, diagnosed mental health conditions, loss of  
25 income and earning capacity, reputational harm, physical harm, past and future medical expenses,  
26 and pain and suffering.

27  
28

1           1007. As a direct and proximate result of each of the Defendants' respective statutory and  
2 regulatory violations, Plaintiffs and Consortium Plaintiffs require and/or will require more  
3 healthcare and services and did incur medical, health, incidental, and related expenses.

4           1008. Plaintiffs and Consortium Plaintiffs were simultaneously injured from the  
5 simultaneous use of the Defendants' defective social media products through no fault of their own.  
6 The fact that there is simultaneous injury to Plaintiffs and Consortium Plaintiffs by the simultaneous  
7 use of Defendants' products means that they are each jointly and severally responsible for the  
8 injuries caused by any one of Defendants' products and the burden shifts to Defendants to identify  
9 alternative causes of the alleged injuries and apportion responsibility for the alleged injuries.

10           1009. Plaintiffs and Consortium Plaintiffs may also require additional medical and/or  
11 hospital care, attention, and services in the future.

12           1010. As a result of each of the Defendant's negligence per se, Plaintiffs suffered severe  
13 mental harm, leading to physical and mental injury, from use of and exposure to Defendants'  
14 respective social media products. Plaintiffs and Consortium Plaintiffs suffered serious damages in  
15 the form of emotional distress, diagnosed mental health conditions, medical expenses, loss of  
16 income and earning capacity, pain and suffering, and reputational harm.

17           1011. Plaintiffs and Consortium Plaintiffs have suffered physical harm, emotional distress,  
18 past and future medical expenses, and pain and suffering.

19           1012. The conduct of each Defendant, as described above, was intentional, fraudulent,  
20 willful, wanton, reckless, malicious, fraudulent, oppressive, extreme, and outrageous, and displayed  
21 an entire want of care and a conscious and depraved indifference to the consequences of its conduct,  
22 including to the health, safety, and welfare of their customers, and warrants an award of punitive  
23 damages in an amount sufficient to punish each Defendant and deter others from like conduct.

24           1013. Each of the Defendants is further liable to Plaintiffs and Consortium Plaintiffs for  
25 punitive damages based upon its willful and wanton conduct toward underage users, including  
26 Plaintiffs whom they knew would be seriously harmed using Defendants' respective social media  
27 products.

28

1 **COUNT 10:**  
2 **SEX AND AGE DISCRIMINATION**  
3 **(Against All Defendants)**

4 1014. Plaintiffs re-allege and incorporate by reference each preceding and succeeding  
5 paragraph as though set forth fully at length herein.

6 1015. Plaintiffs bring claims for sex and age discrimination pursuant to California’s Unruh  
7 Civil Rights Act, and other state laws that are similar and applicable. Defendants are engaged in  
8 discriminatory practices, including but not limited to their programming and operation of  
9 recommendation technologies in a manner that discriminates against users based on their age,  
10 gender, and other protect class characteristics. Defendants know or should know of the algorithmic  
11 bias defect in their product designs, programming, and operations but continue to engage in such  
12 discrimination regardless. California law prohibits such reprehensible conduct, including for online  
13 business establishments like Meta, Instagram, Snapchat, and TikTok.

14 1016. The California Unruh Civil Rights Act (“Unruh Act” or “Act”) provides that “All  
15 persons within the jurisdiction of this state are free and equal, and no matter what their sex . . . are  
16 entitled to the full and equal accommodations, advantages, facilities, privileges, or services in all  
17 business establishments of every kind whatsoever.” Cal. Civ. Code § 51(b). The Unruh Act secures  
18 to all persons equal access and treatment no matter their personal characteristics.

19 1017. For purposes of the Unruh Act, the word “Sex” “includes, but is not limited to, a  
20 person’s gender.” *Id.* at § 51(e)(5).

21 1018. For purposes of the Unruh Act, age is a personal characteristic that falls within the  
22 Act’s prohibition against discrimination.

23 1019. The Unruh Act applies to online business establishments, including those operated  
24 by Defendants.

25 1020. As described above, Defendants have intentionally, knowingly, and purposefully  
26 engaged in business practices that deny girls and young women the full and equal accommodations,  
27 advantages, facilities, and services of Defendants’ business establishments, including but not limited  
28 to classifying, categorizing, and segregating its users by gender; and intentionally directing harmful



1 content, including content related to eating disorders, to young girls and young women because of  
2 their gender and age.

3 1021. These discriminatory practices are not supported by any compelling social policy or  
4 societal interest.

5 1022. Defendants' unequal treatment of young girls and women was arbitrary, insidious  
6 and unreasonable. Defendants' interest in maximizing profits does justify their unequal treatment  
7 based on gender and age.

8 1023. Defendants are liable to Plaintiffs for statutory damages pursuant to section 52(a) of  
9 the California Civil Code for each and every offense, as well as attorneys' fees, costs, and expenses  
10 incurred in bringing this action.

11 **COUNT 11:**  
12 **WRONGFUL DEATH**  
13 **(Against All Defendants)**

14 1024. Plaintiffs re-allege and incorporate by reference each preceding and succeeding  
15 paragraph as though set forth fully at length herein.

16 1025. This Cause of Action is asserted by and on behalf of Plaintiffs bringing their actions  
17 as heirs of Decedents or as duly-appointed representatives of the estates of Decedents or successor-  
18 in-interests pursuant to the laws of various states.

19 1026. As a direct and proximate result of the conduct of each of the Defendants and the  
20 defective nature of its respective social media products as outlined above, Decedents suffered  
21 wrongful death, and Plaintiffs suing as heirs or estate representatives of Decedents seek damages  
22 therefor, including loss of financial support, loss of society, funeral expenses, estate administration  
23 expenses, and noneconomic damages including pain and suffering as permitted under various states'  
24 laws, and where applicable punitive damages.

25 1027. Plaintiffs demand judgment against each of the Defendants for compensatory, treble,  
26 and punitive damages, together with interest, costs of suit, attorneys' fees, as permitted under  
27 various states' laws and all such other relief as the Court deems proper.  
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**COUNT 12:**  
**SURVIVAL ACTION**  
**(Against All Defendants)**

1028. Plaintiffs re-allege and incorporate by reference each preceding and succeeding paragraph as though set forth fully at length herein.

1029. This Cause of Action is asserted by and on behalf of heirs of Decedents or the duly-appointed representatives of the estates of Decedents or successor-in-interests, pursuant to the laws of various states.

1030. As a direct and proximate result of the conduct of each of the Defendants and the defective nature of its respective social media products as outlined above, Decedents suffered bodily injury resulting in pre-death pain and suffering, disability, disfigurement, mental anguish, emotional distress, loss of capacity of the enjoyment of life, a shortened life expectancy, expenses for hospitalizations and other medical and nursing treatments, loss of earnings, and loss of ability to earn. Plaintiffs suing as heirs or estate representatives seek damages for these injuries to their respective Decedents as permitted under various states' laws, including where applicable punitive damages. *See* Cal. Code Civ. Proc. § 337.34.

1031. Plaintiffs demand judgment against each of the Defendants for compensatory, treble, and punitive damages, together with interest, costs of suit, attorneys' fees, as permitted under various states' law, and all such other relief as the Court deems proper.

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**COUNT 13:**  
**LOSS OF CONSORTIUM AND SOCIETY**  
**(Against All Defendants)**

1032. Consortium Plaintiffs re-allege and incorporate by reference each preceding and succeeding paragraph as though set forth fully at length herein.

1033. As a direct and proximate result of the conduct of each of the Defendants and the defective nature of its respective social media products as outlined above, the Consortium Plaintiffs have necessarily paid and/or have become liable to pay, and will continue to pay and/or continue to be liable to pay, for medical aid, medical treatment, and medications of the Plaintiffs in this litigation.

1           1034. As a direct and proximate result of the conduct of each of the Defendants and the  
2 defective nature of Defendants' respective social media products outlined above, the Consortium  
3 Plaintiffs have been caused and will continue to be caused the loss of their children's, wards',  
4 spouses', parents', siblings', and/or other close family members' consortium, companionship,  
5 services, society, love, and comforts, and their familial association has been altered, and,  
6 accordingly, the Consortium Plaintiffs have been caused great mental anguish and emotional  
7 distress.

8           1035. Each Defendant's conduct, as described above, was willful, wanton, reckless,  
9 malicious, fraudulent, oppressive, extreme and outrageous, and displayed an entire want of care and  
10 a conscious and depraved indifference to the consequences of its conduct, including to the health,  
11 safety, and welfare of Plaintiffs, and warrants an award of punitive damages.

12           1036. Consortium Plaintiffs demand judgment against each of the Defendants for  
13 compensatory, treble, and punitive damages, together with interest, costs of suit, attorneys' fees, and  
14 all such other relief as the Court deems proper.

15 **VII. PRAYER FOR RELIEF**

16           WHEREFORE, Plaintiffs and Consortium Plaintiffs prays for judgment against each of the  
17 Defendants META, SNAP, BYTEDANCE, GOOGLE, and Other Defendants named by Plaintiff  
18 in the Notice of Adoption of Master Complaint, jointly and severally, and as appropriate to each  
19 cause of action alleged and the standing of Plaintiffs as follows:

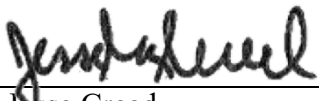
- 20           1. Past, present and future general damages, the exact amount of which has yet to be  
21           ascertained, in an amount which will conform to proof at time of trial, to compensate  
22           Plaintiffs and Consortium Plaintiffs for injuries sustained as a result of the use of  
23           each Defendant's respective social media products including, but not limited to  
24           physical pain and suffering, mental anguish, loss of enjoyment of life, emotional  
25           distress, expenses for hospitalizations and medical treatments;
- 26           2. Past, present and future economic and special damages according to proof at the time  
27           of trial;
- 28           3. Loss of earnings and impaired earning capacity according to proof at the time of trial;

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- 4. Medical expenses, past and future, according to proof at the time of trial;
- 5. Loss of consortium damages for loss of consortium, companionship, services, society, love, and comforts, alteration to their marital or filial association, and mental anguish and emotional distress, according to proof at the time of trial;
- 6. Funeral expenses and other special damages according to proof at the time of trial;
- 7. Punitive or exemplary damages according to proof at the time of trial;
- 8. All damages available for wrongful death and survival;
- 9. Exemplary and punitive damages in an amount in excess of the jurisdictional limits;
- 10. Attorneys' fees;
- 11. For costs of suit incurred herein;
- 12. Pre-judgment and post-judgment interest as provided by law;
- 13. For such other and further relief as the Court may deem just and proper.

Dated: May 15, 2023

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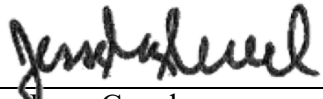
1 **VIII. DEMAND FOR JURY TRIAL**

2 Plaintiffs hereby demand a jury trial on all issues so triable.

3 Dated: May 15, 2023

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7 Co-Liaison Counsel for Plaintiffs

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