

No. 21-1333

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IN THE  
**Supreme Court of the United States**

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REYNALDO GONZALEZ, *et al.*,  
*Petitioner,*

v.

GOOGLE LLC,  
*Respondent.*

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**On a Writ of Certiorari to the  
United States Court of Appeals  
for the Ninth Circuit**

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**BRIEF OF CHILDREN'S ADVOCACY  
INSTITUTE AT THE UNIVERSITY OF SAN  
DIEGO SCHOOL OF LAW AS *AMICUS CURIAE*  
IN SUPPORT OF NEITHER PARTY**

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## **QUESTION PRESENTED**

Does section 230(c)(1) immunize interactive computer services when they make targeted recommendations of information provided by another information content provider, or only limit the liability of interactive computer services when they engage in traditional editorial functions (such as deciding whether to display or withdraw) with regard to such information?

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## STATEMENT OF INTEREST

Founded in 1989 at the University of San Diego School of Law, the Children’s Advocacy Institute (“CAI”) is an academic center that promotes the well-being of children through scholarship, coursework, direct legal services, litigation, agency rulemaking, and California and federal legislative advocacy.<sup>1</sup>

Child safety has long been one of CAI’s priorities. CAI has written and sponsored numerous California statutes improving child safety in the areas of recreation, foster care, Internet privacy, and child sex trafficking. Most relevantly and recently, CAI co-sponsored Assembly Bill 2408 (Cunningham and Wicks) in 2022,<sup>2</sup> a bill that, in part, sought to prohibit social media companies from using technologies the platform knows will cause children to become medically addicted to it.

CAI takes no position on whether the petitioners’ claims against Google in this case should ultimately prevail at trial or summary judgment. CAI is interested in ensuring that courts adjudicating Rule 12(b)(6) motions in cases against social media platforms where harms to children are alleged will differentiate between harms allegedly caused, in whole or in part, by the platform’s own conduct from which platforms are not immunized by section 230(c)(1), and harms allegedly caused by only third-party content, from which they are immunized.

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<sup>1</sup> No counsel for a party authored any part of this brief. No person other than *amicus curiae*, its charitable supporters, or its counsel made a monetary contribution intended to fund its preparation or submission. All parties have filed blanket consents permitting the filing of this brief.

<sup>2</sup> See supporters, press, background materials, and the fate of the bill here: <https://tinyurl.com/2s42sh3c>.

CAI respectfully offers this *amicus curiae* brief on behalf of the children it represents because, as described below, some platforms know they are causing widespread harm to children, especially girls, and thus children have a life-and-death stake in whether Congress intended section 230(c)(1) to immunize social media companies from such harms.

### **SUMMARY OF ARGUMENT**

The question foundational to the one presented is, can courts practically distinguish between harms caused by “targeted recommendations” that fall outside 47 U.S.C. § 230(c)(1)’s<sup>3</sup> immunity and harms caused by “traditional editorial functions” such as “displaying” or “withdrawing” content? The answer is yes, in two ways.

The first way is technological. The (i) artificial intelligence (“AI”)-driven autonomously created recommendation algorithms that decide who sees what and for how long (whether they asked to see it or not), (ii) the vast amounts of data about each individual user, and the (iii) integrated neuroscience-grounded interfaces like nudges, “likes,” and infinite scrolling invented to keep users glued to these streaming recommendations for as long as possible, together operate as a machine that is distinct from the content uploaded by “another content provider.” This machine is distinct both as a different thing in and of itself and also distinct in the effects it has on people.

The second way is legal. Because of the autonomous way the AI recommendation machines deployed by YouTube and other social media businesses such as

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<sup>3</sup> Hereinafter, “section 230(c)(1)”.

Facebook<sup>4</sup> and TikTok operate, literally here *nobody*—no human — is likely engaging in “traditional editorial functions.” Humans do act to instruct autonomous social media AI recommendation machines to re-write and re-write their algorithms to deliver whatever is required to help keep users online as long as possible; to “maximize user engagement” in the parlance of social media. But, that programming business decision is a plain vanilla one which, like any other such decision, can cause foreseeable harms and be actionable in tort. It is not an editorial decision nor is it publishing.

In point of fact, because social media platforms both determine some of what gets uploaded in the first place and the priority of who sees what, when, and for how long, YouTube is “responsible . . . in part for the creation and development of information” seen by users. Accordingly, YouTube is itself an “information content provider” under section 47 U.S.C. § 230(f)(3), and enjoys no immunity under section 230(c)(1).

Whether courts categorically acknowledge these distinctions in adjudicating Rule 12(b)(6) motions, allowing discovery to reveal if the harm was in fact caused by the platform’s inventions or third-party content, is the single most important question implicating the safety and well-being of children — especially girls -- in the nation today. This is tragically revealed and exemplified by the role of social media’s AI recommendation machines and interfaces in the current, never-before-seen spike in teen girl suicide and the role these inventions play in facilitating the sexual trafficking of girls. These and other less dramatic but permanently life-impairing harms like

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<sup>4</sup> We use the more familiar “Facebook” to describe Meta and its constituent companies, including Instagram.

social media addiction being suffered *en masse* by our children would not be at crisis levels if the AI recommendation machines and neuroscience-grounded interfaces did not exist and if YouTube, Facebook, and TikTok operated as the simple publishers of content created by others, as envisioned by Congress.

## ARGUMENT

### I. How AI-driven Social Media Recommendation Machines Like Google's YouTube Work: An Overview.

AI-enabled recommendation algorithms take inputs -- data falling within identified categories -- and process those inputs following a set of rules. This algorithmic process results in an output: in YouTube's, TikTok's, and Facebook's case, the correspondence between someone visiting the platform and the chosen set of recommended videos presented or not presented to the user.<sup>5</sup>

AI is a set of technologies that autonomously re-write complex and powerful algorithms such as the YouTube recommendation algorithm. AI machine learning is tasked with writing the recommendation algorithm that matches an individual from among YouTube's 2.6 billion users to content drawn from its inventory of 800 million videos. Initially the machine is trained to successfully associate past viewing data in various combinations with videos that satisfy users.

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<sup>5</sup> Without discovery in this case and discovery-level information about other platforms, we have no way of knowing exactly how their AI recommendation machines work and so can only describe how these machines work generally. When it comes to whether section 230(c)(1)'s immunity applies, though, granular specifics can matter which is why Rule 12(b)(6) motions should in these cases be granted sparingly in favor of effectuating Congressional intent on the more certain footing of a full record.

Where promoted content is viewed, the algorithm is confirmed. Where promoted videos are ignored or rejected by the viewer, the AI itself adjusts the algorithm, seeking to a more successful subsequent engagement. The AI recommendation algorithm is constantly improving by checking its predictions against the subsequent behavior of the viewer. Google rightly describes its recommendation system as “constantly evolving, learning every day from over 80 billion pieces of information[.]”<sup>6</sup>

AI places “categories” or “labels” on data derived from Google’s vast reservoir of personal behavioral data which is itself derived from its many product offerings, including YouTube. The labels that the AI assigns to its data and relationships between data permit YouTube’s algorithm to locate and retrieve the videos most likely to achieve the goal preprogrammed into the algorithm.

Some “labeled” data will likely serve to identify the particular user, such as a user’s age, gender, address, and type of device. Some will be used to capture a user’s prior history with YouTube, such as their views, likes and dislikes, comments, and time of engagement. AI also itself develops and “labels” data that capture specific characteristics of the content found in its inventories. The “labels” the AI assigns to such characteristics permit the AI’s algorithm to locate and retrieve the most appealing videos for an individual user. The YouTube recommendation algorithm locates and displays videos that are often watched together or which are related by topic.

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<sup>6</sup> Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube Official Blog (Sept. 15, 2021), <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

AI is so powerful it can across vast amounts of data detect associations that are not evident to humans. YouTube’s algorithm knows us better than we know ourselves.

As a business matter, YouTube seeks to maximize the advertising revenue it receives. The dominant ranking factor of the current version of the YouTube recommendation system is apparently maximizing viewer “satisfaction” or what is more commonly called “user engagement.”<sup>7</sup> Engagement is an algorithm built on clicks of the “not interested” button, likes and dislikes, sharing, commenting, average view duration and average percentage of videos viewed.

In this way, YouTube experiences are personalized to match YouTube’s billions of users and actually drive a significant amount of who actually sees what, when, and for how long.<sup>8</sup>

But, that’s not all. How the platforms entice users to interact with the platform’s recommendations is the final part of the integrated, AI automated recommending machine. YouTube’s recommendation system, for example, includes the home page and the Up Next menu of suggested videos.<sup>9</sup> The pages of the other famil-

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<sup>7</sup> Matt Southern, *20 Confirmed Facts About YouTube’s Algorithm*, SEARCH ENGINE JOURNAL (April 26, 2021), available at <https://www.searchenginejournal.com/youtube-algorithm-facts/403984/>.

<sup>8</sup> *Id.*, “So if you like tennis videos and our system notices that others who like the same tennis videos as you also enjoy jazz videos, you may be recommended jazz videos, even if you’ve never watched a single one before.”

<sup>9</sup> *Recommended Videos*, Youtube, <https://www.youtube.com/howyoutubeworks/product-features/recommendations/> (last visited Dec. 4, 2022).

iar platforms include “likes,” comments, and “nudges” enticing users who have left to return to the platform.

The founding president of Facebook Sean Parker has said “The thought process that went into building these applications. . . was all about: ‘How do we consume as much of your time and conscious attention as possible?’” Erica Pandy, *Sean Parker: Facebook Was Designed To Exploit Human “Vulnerability”*, Axios (Nov. 9, 2017), <https://tinyurl.com/5camx6rt>. YouTube’s, Facebook’s, and TikTok’s executives and management may set for the AI a goal for the recommendation algorithm, but automated AI is invented, programmed, and “hired” to chart autonomously thereafter the best course to obtain this goal.

## **II. How In Detail Particular Parts Of AI-driven Social Media Recommendation Machines Like YouTube’s Work.**

### **A. Social media platforms’ revenue model.**

Social media platforms like YouTube and Facebook derive their profits from the sale of on-screen advertising. The more time spent on the platform, the more ads will be seen, the more valuable the advertising becomes. Plus, the more time a user spends on the platform, the more data the platform derives about the user which, in turn, it can use to keep the user on the platform. It is a recursive process.

“Advertising isn’t just a way for [Facebook] and its ilk to perhaps earn a little bit of revenue in between hosting family photos and personal musings. It’s the very purpose of the site’s existence, and the same goes for Twitter and LinkedIn.” “There’s a reason why [Facebook’s] 10-K filing with the U.S. Securities and Exchange Commission (SEC) uses the acronym ARPU, as in average revenue per user” and why investors

track “monthly median engagement levels” measuring increases or decreases in the average number of likes, comments posted, and ads clicked.<sup>10</sup>

There is no natural end-point to the motivation of social media companies to engage their users through ever more potent and personalized recommendations. To achieve revenue and market share growth every quarter – to not peak or decline – platforms must figure out ways to keep users on their platforms more and more. “Facebook’s data, algorithms and use of machine learning have continued to improve . . . This means that users are seeing more and more relevant content, and this of course leads to more engagement on the platform.” Salvador Rodriguez, *Facebook has had numerous scandals, So why does user engagement keep growing?*, Milwaukee J. Sentinel (Jul 22, 2019), <https://tinyurl.com/y66mbvpt>.

**B. AI-recommendation machines can operate autonomously. Whether such automation can foreseeably cause harms to particular sets of people is a question of fact in each case.**

YouTube’s human employees do not select the content to be delivered to each of the platform’s 2 billion users. AI machine learning algorithms make those “decisions” and generate these outputs to users autonomously. Broadly speaking, the only human input into an AI algorithm is to set the AI’s goal or objective and provide it with initial means for achieving that goal.

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<sup>10</sup> All quotes and data from Greg McFarlane, *How Facebook (Meta), Twitter, Social Media Make Money From You*, INVESTOPEDIA (Dec. 2, 2022), <https://tinyurl.com/yeyndyuj>.

When generally speaking about AI, it is challenging to describe just how truly and autonomously intelligent AI machines are, but here is an example:

Cicero, released last week [by Facebook], was able to trick humans into thinking it was real . . . and can invite players to join alliances, craft invasion plans and negotiate peace deals when needed. The model's mastery of language surprised some scientists and its creators, who thought this level of sophistication was years away. But experts said its ability to withhold information, think multiple steps ahead of opponents and outsmart human competitors sparks broader concerns. . . . "It's a great example of just how much we can fool other human beings," said Kentaro Toyama, a professor and artificial intelligence expert at the University of Michigan[.] "These things are super scary . . . [and] could be used for evil."

Pranshu Verma, *Meta's New AI is Skilled at a Ruthless, Power-Seeking Game*, Wash. Post (Dec. 1, 2022), <https://tinyurl.com/4vbxp924>.<sup>11</sup>

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<sup>11</sup> Consider the additional example of Alpha Go Zero, an AI program developed by Google's sister company DeepMind. Alpha Go Zero was programmed without any data and given only one instruction - the goal of defeating its predecessor, Alpha Go. Alpha Go had been trained through algorithmic inputs by humans on the rules and strategies of Go, the world's most complex board game, enabling it to beat the world's best human Go masters. In contrast, Alpha Go Zero was not taught anything about the game, instead learning it on its own. Human operators gave Alpha Go Zero just a goal - that of beating Alpha Go, which it did. David Silver, et al, *Mastering the Game of Go Without Human Knowledge*, 550 *Nature* 754, 754-59 (2017).

So, if an AI developed by platforms like YouTube and Facebook is given the instruction “maximize user engagement!” it will do so by testing what recommendations work best and then re-writing and re-writing its own algorithms, at fantastic speeds, adjusting in real time, based not a “neutral” criteria or one that is solely or even mostly determined by what the user wants. Rather, the AI will serve up content that fulfills the goal of “maximizing engagement” no matter how foreseeably harm might occur, precisely because AI does not foresee harm, unless programmed to avoid it. If a lawsuit alleges that someone was harmed in whole or in part because of a goal given to an AI, some form of reasonable human intervention at some phase of the content-gathering and delivery-to-user process is required to minimize or eliminate these harms. Otherwise, the company that issued the instruction would fail to satisfy its duty of ordinary care in negligence law.

### **C. Massive amounts of the most intimate data imaginable is used by the AI.**

The behavioral data that companies like YouTube gather about us for use by recommendation algorithms is far more robust, profoundly intimate, and psychologically attractive than even what would be available from a constant video stream from each room of our homes.

Nobody, including the petitioners whose lawsuit was dismissed prior to discovery, knows exactly how YouTube’s algorithms work. But they likely identify and combine massive amounts of user data from online profiles, browsing activity, smart devices, public sensors, video and music preferences, public records, and many other means of data capture, especially those provided by Google itself, such as search, email, storage,

calendar, addressing, news and meeting services, photo sharing, streaming television, telephone and voice services (real and virtual), authoring and productivity tools, home automation, mapping, imaging and translation services, and many other products and services equipped to harvest user data. And, of course, YouTube itself captures user data and its AI learns from that, too. As a result, online service providers may have up to a million data points on each user of their “free” services.<sup>12</sup>

Once raw data is collected from this “big data” ecosystem, it is digested by a process known as data analytics, resulting in the creation of individualized behavioral profiles on billions of YouTube users. Through these analytical tools, YouTube has assembled a behavioral profile on each of its users; one constantly updated based on what the user does and what other users do. In addition to the behavioral and psychographic profiles used as inputs, the algorithm’s recommended output is also customized by the viewer’s location, type of device she is using (*e.g.*, smartphone, computer or high definition television), bandwidth and time of day.

**D. “Gamification,” “nudges” “infinite scroll,” “likes,” “streaks” and how they work in combination with AI-recommendations to maximize “user engagement.”**

Quoting the question presented, the final part of how social media platforms “make targeted recom-

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<sup>12</sup> For example, this brief was researched with the help of Google search and Google Scholar, written using Google Docs, and shared among authors via Gmail at meetings scheduled by Google calendar. At least one author uses Google Fi for his cellular service.

recommendations” is how those recommendations are visually presented to the user. Social media platforms use neuroscientifically grounded techniques that “gamify” how users interact with the content recommended. Here are some examples:

- The infinite or bottomless scroll serves up a never-ending stream of videos as the user scrolls downward. Hilary Andersson, *Social Media Apps Are ‘Deliberately’ Addictive to Users*, BBC News (Jul. 4, 2018), <https://tinyurl.com/mwy2vppb>.
- Algorithms might shape the user’s perception of their relationships with other users without the user’s knowledge. Motahhare Eslami et al., “*I Always Assumed That I Wasn’t Really That Close to [Her]’: Reasoning About Invisible Algorithms in News Feeds*,” Proc. of the 33rd Ann. ACM Conf. on Hum. Factors in Computing Sys. 153, 153-62 (2015), <https://tinyurl.com/4fpx5vwn>.
- Teens are powerfully influenced by the Facebook “likes” from their peers. Eveline A. Crone & Elly A. Konijn, *Media Use and Brain Development During Adolescence*, 9 Nat. Comm’n. (2018), pp. 1-10, <https://tinyurl.com/rvjun2j5>.

“A prominent example of a gamification element which gained vast popularity . . . especially among adolescents, are *Snapchat Streaks*.” Dayana Hristova et al., “*Why Did We Lose Our Snapchat Streak?*” *Social Media Gamification and Metacommunication*, 5 *Comput. in Hum. Behav. Reps.* (2022), <https://tinyurl.com/5chfmacf>.<sup>13</sup> Streaks “mark[]s how many days

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<sup>13</sup> Snap offers a mobile-phone camera application that allows users to take photos and videos, exchange them with family and

in a row two users have been exchanging snaps (self-made pictures or videos). The feature nudges users to snap at least once each 24 hours with their streak partners . . . Snapchat Streaks are a relational score, this goal can only be met if both partners cooperate daily over extended periods of time[.] Celebrating milestones such as 100 streaks -- snapping 100 days in a row with one person -- is crucial for some adolescents who share posting about such achievements to their story.” *Id.*

Several former Facebook executives have acknowledged that the gamifying design features they invented like these intentionally and neuroscientifically exploit weaknesses in human psychology. Leah Pearlman, co-inventor of Facebook’s “like” button, admitted that she herself had become hooked on Facebook because she had begun basing her sense of self-worth on the number of “likes” she had. Hilary Andersson, *Social Media Apps Are ‘Deliberately’ Addictive to Users*, BBC News (Jul. 4, 2018), <https://tinyurl.com/mwy2vppb>. Sean Parker, Facebook’s first president, admitted that user interface designers “exploit[ed] a vulnerability in human psychology” by rewarding users with “a little dopamine hit” to ensure Facebook would “consume as much of [the users’] time and conscious attention as possible.” Olivia Solon, *Ex-Facebook President Sean Parker: Site Made to Exploit Human ‘Vulnerability’*, *The Guardian* (No. 9, 2017), <https://tinyurl.com/4386pzyv>.

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friends, and chat. Snap generates substantially all of its revenue through advertising.

**III. The Information Output Generated by an AI-recommendation is Not Information Provided by Another Information Content Provider. It Is The Output Of An Entirely Separate Product.**

**A. Google’s AI recommendation machine produces its own content.**

By (i) bundling vast amounts of content created by third-parties into a usable database (ii) in ways tied to the personalized user profile *the AI itself creates* based upon (iii) YouTube’s programming and based upon (iv) data that is collected from a wide variety of Google’s own inventions and products, where the result is (v) poured and melded into a YouTube graphically designed interface, YouTube’s software engineers and other scientists have created their own fully integrated and stand-alone work that is not the work of “another content provider.”

We know this to be true intuitively because YouTube’s content-making machine *produces an experience* that is cognizably different than the experience produced by watching third party videos alone or on another platform. The experience may include the third-party video just as a rap song can “sample” from another song. But the rap song and the song it sampled are not necessarily the same song. For this reason, the harmful consequences of these inventions can be different from the harmful consequences experienced simply by viewing a video alone or on another platform. Because such alleged harms do not necessarily arise from “another content provider” courts should not on the bases of mere claims from platforms about how their platforms “really” operate grant Rule 12(b)(6) motions based upon section

230(c)(1). *Fair Hous. Council v. Roommates.com*, LLC, 521 F.3d 1157, 1162 (9th Cir. 2008).<sup>14</sup>

This is true when all of the parts of the machine work together but it is also true with any one of the machine's parts. If the facts in discovery show YouTube is the creator of goals for the AI and those goals caused foreseeable harm, then it is YouTube's content – the programmed goal – that creates liability and YouTube is not entitled to section 230(c)(1) immunity. Indeed, by setting the AI's goal, providing it with input criteria, and giving it access to more personal data than can be imagined and for billions of people, YouTube sets the entire process in motion well in advance of any actual "publishing" of ISIS third-party content. YouTube software engineers are properly viewed as authors of code for their recommendation engines with YouTube being an information content provider when it comes to that code and its consequences.

Similarly, copyright law rightly acknowledges the stand-alone and distinct nature of a compilation as a unique work and affords the compilation the possibility of its own stand-alone protection. (See, 17 U.S.C. § 103(b)) In the same vein, copyright in a work does not extend to transformative uses by others, such as rendering a thumbnail image from the original. For this reason, a photographer would have a hard time suing Google for making his photographs searchable because Google's use transforms the photographs into something different than the photograph. *Perfect 10*,

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<sup>14</sup> Patent law also draws a distinction between an algorithm and the device which it controls, allowing patents for both in appropriate cases. *Alice Corp. v. CLS Bank*, 573 U.S. 208 (2014).

*Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1165 (9th Cir. 2007).

Moreover, YouTube does not “neutrally” “display” ISIS or any other videos. Unlike in *Kimzey v. Yelp! Inc.*, 836 F.3d 1263, 1270 (9th Cir. 2016) where the website did “‘absolutely nothing to enhance the defamatory sting of the message’ beyond the words offered by the [third-party],” YouTube apparently (only discovery can verify this) takes at least some affirmative – indeed, likely indispensable – steps to guarantee that those who are most likely to be recruited to ISIS are assured of being connected to ISIS, over and over and over again.

**B. Social media platforms’ AI-driven recommendation machines “develop information.”**

Section 230(f)(3) defines “information content provider” as someone who “is responsible, in whole or in part, for the creation or development of information,” it does not define “development.” Textually, “development” includes activities beyond *creation*, or we are left with redundancy in the statute.

The term “developer” in the off-line video and publishing worlds (*e.g.*, TV, movies, books) includes a broad panoply of actions both before and after the literal authoring of content. It includes the entire system of production, including getting content ready for distribution. This is how “developer” was likely known to Congress that enacted section 230(c)(1) in 1996.

Realistically, without YouTube’s active “development” of its AI-driven recommendation algorithm, hosted videos might as well not exist. YouTube hosts upwards of a billion videos arranged in 51 million different channels. Five hundred hours of new video

are uploaded every minute of every day. If YouTube did not have the world's second largest search engine (Google has the first), it would be impossible for a user to find desired content on the platform.

So, when the court below says that “the TAC does not allege Google’s algorithms prompted ISIS to post unlawful content,” (*Gonzalez v. Google LLC*, 2 F.4th 871, 896 (9th Cir. 2021)) the emphasis on “algorithms” *per se* misses the point. Without YouTube’s search engine and AI-driven recommendation algorithm, ISIS would likely not bother to post content on the platform. It would not be worth anyone’s time to toss such tiny needles into an ocean-sized haystack. With social media as its developer-recommending partners, however, ISIS has a powerful assistant that it knows will get its message to the people most likely to be receptive to it. So, it posts videos on social media platforms with the most fruitful recommendation algorithms.

### **C. AI decision-making is not “publishing.”**

AI has no constitutional or statutory rights. As noted by the Ninth Circuit, the publication protected by section 230 “involves reviewing, editing, and deciding whether to publish or to withdraw from publication third-party content.” *Gonzalez*, 2 F.4th at 892 (citing *Barnes v. Yahoo!, Inc.*, 570 F.3d 1096, 1102 (9th Cir. 2009)). The AI does not “review, edit or decide to publish.” The AI-driven recommendation algorithms simply calculate what content to push, and how, to achieve the goal of keeping eyeballs glued to the screen, for as long as possible. See *Kimzey v. Yelp! Inc.*, 836 F.3d 1263, 1269, n.4 (9th Cir. 2016) (“draw[ing] the line at the ‘crucial distinction between, on the one hand, taking actions (traditional to publishers) that are necessary to the display of unwelcome and actionable content and, on the other hand,

responsibility for what makes the displayed content illegal or actionable”).

**D. Social media recommendation machines are not “neutral” and do not just passively “display” what is uploaded. They are “directly involved” in what content gets uploaded.**

Google argues that its YouTube recommendation algorithms are “neutral” because they do not treat ISIS content differently than any other hosted videos. *Gonzalez*, 2 F.4th at 894. But Google fails to acknowledge that third party content is treated differently based on Google’s interests and, thus, the platform is not at all “neutral” when it comes to who sees what, when, how, and for how long. At best Google’s claims about YouTube – they are just claims -- of “neutrality” are incomplete and should be tested through discovery. Even without such discovery, we can be sure that YouTube favors some content over other content based not on its editorial values but on what it forecasts will keep people on the platform.

Google also pleads that its algorithms neutrally recommend content “based on that user’s input.” *Gonzalez*, 2 F.4th at 895. That is also a claim untested by discovery. From what we know, user input is only one part of Google’s vast data reservoir that it accesses to offer a personalized experience to each one of its 2 billion users. See Karl Manheim and Lyric Kaplan, *Artificial Intelligence: Risks to Privacy and Democracy*, 21 Yale J.L. & Tech. 106, 110-26 (2019). This alone negates YouTube’s status as a publisher since its algorithm chooses content specifically for private, not public, viewing. *Reno v. ACLU*, 521 U.S. 844, 853 (1997) (“publish” means distribution to a general audience); *Klayman v. Zuckerberg*, 753 F.3d 1354,

1359 (2014) (ordinary meaning of “publisher” is one who reproduces work intended for public consumption).

From what we know, YouTube’s learning machine does more than simply identify and cater user preferences; *it helps develop those preferences in the first place and on an ongoing basis*. For example, when a user watches a recommended video, or gives it a “like” rating, that input serves as positive feedback to the algorithm which then promotes similar content for subsequent iterations, demoting other content otherwise available and might be interesting to the user. In essence, the algorithm determines what the user should be looking for. *Force v. Facebook*, 934 F.3d 53, 83 (2nd Cir. 2019) (Katzman, C.J. concurring in part and dissenting in part) (“It envelops the user, immersing her in an entire universe filled with people, ideas, and events she may never have discovered on her own”).

The more inflammatory or fictitious a given piece of content is, the more likely it is to spread through the social media ecosystem. Paul Lewis, *Fiction Is Outperforming Reality: How YouTube’s Algorithm Distorts Truth*, *The Guardian* (Feb. 2, 2018), <https://tinyurl.com/3xhn6mv8>; Michael H. Keller, *The Flourishing Business of Fake YouTube Views*, *N.Y. TIMES* (Aug. 11, 2018), <https://tinyurl.com/5dbxww52>. We can presume that, if surveyed, each user would if they were in control select less toxic platform experiences. But, users are not in control. AI impelled by the goal of maximizing user engagement is. As a consequence, the more inflammatory a post or video is, the more it will attract attention compared to others, and useful it is to a platform whose revenue is derived from page views. It is the algorithm that sets trends and determines which content goes viral. In many respects, algorithms are now more powerful than are civil and

democratic institutions in setting the public discourse and prescribing social values. We have entered the age of “algocracy.” John Dahner, *The Threat of Algocracy: Reality, Resistance and Accommodation*, *Philosophy and Technology* 29(3): 245-268 (2016).

Google also argues (mostly incorrectly) that appellate court have “held only that section 230 [] protects an interactive computer service which merely displays third party content selected to be of interest to the viewer” and that it offers such a “displaying” service. Br. Repl.1. Even if this is what the courts held, social media platforms like YouTube’s can in no way, shape, or form be accurately described as simply permitting the gallery-like, or op-ed column “display” of others’ content.

In sum, YouTube’s AI-recommendation algorithm is alleged by petitioners to be the product that at least in part caused injury, just as Tesla’s AutoPilot AI is a product that can at least in part cause an auto accident. The ultimate blow may be delivered to the victim by something tangible, but how it was deployed in the first place is the result of design inputs by engineers and outputs made by AI algorithms.<sup>15</sup> It is those outputs that are involved here, and soon will be across a wide spectrum of society.

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<sup>15</sup> See Alfred R. Cowger, Jr., *Liability Considerations When Autonomous Vehicles Choose the Accident Victim*, 19 J. High Tech. L. 1 (2018), <https://tinyurl.com/4vn9nm2f>.

#### **IV. A Lawsuit Based on Harm Caused by Speech is Distinct from one Alleging Harm Caused by AI-recommendations Like YouTube's.**

Not every lawsuit involving “content” is a lawsuit about that content alone. For instance, laws proscribing subliminal advertising, workplace harassment, and cyberbullying, all make actionable or unlawful the context of speech, not the speech itself. It is context and means of delivery that results in the categorical exclusion of true threats, fighting words, and incitement from First Amendment protection. Even Justice Holmes’ classic example of unprotected speech -- falsely shouting fire in a crowded theater (*Schenck v. United States*, 249 U.S. 47 (1919)) -- relies on context, where and how the utterance is delivered and whether harms are caused as a result. Thus, statutes differentiate between false shouts of “fire!” if someone is harmed and shouts of “fire!” that is transmitted to law enforcement. See, e.g., C.R.S. § 18-8-111. *Waller v. Osborne*, 763 F. Supp. 1144, 1148 (M.D. Ga. 1991) (subliminal speech would be “akin to false and misleading commercial advertising” and “worthy of little, if any, first amendment constitutional protection.”)

Here, the same is conceptually true, depending on the facts revealed by discovery. An AI-recommendation machine that personalizes content, uses neuroscience that result in addiction in some (see discussion below), complimented by infinitely scrolling videos and “likes” and “nudges” that remind users to return to the platform so the platform can charge more for ads, has on its face little if nothing to do with “[a] website’s decisions to moderate content, restrict users, or allow third parties full freedom to post content and interest

with each other.” *Gonzalez*, 2 F.4th at 914 (Berzon, J, concurring).

**V. Social Media Platforms Are The Only Entities That Can Prevent Or Reduce The Risk Of The Injuries Suffered By Gonzalez And Being Suffered, On An Unprecedented and Catastrophic Scale, By America’s Children.**

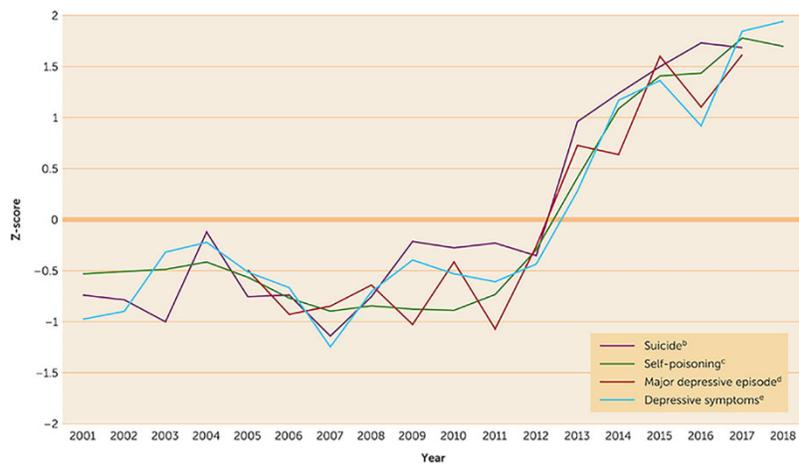
Someone must be “responsible for what makes the displayed content allegedly unlawful.” *Jones v. Dirty World Entm’t Recordings LLC*, 755 F.3d 398 (6th Cir. 2014). Realistically, as AI has no rights it has no responsibilities, the only responsible parties are the companies that invent, program, and deploy these machines, including their interfaces and AI recommendations.

No question is more important for our nation’s children than whether Congress in 1996 intended completely to immunize today’s AI-recommendation machines from suits alleging not just foreseeable but knowingly inflicted harms. Three examples illustrate the gravity of this question.

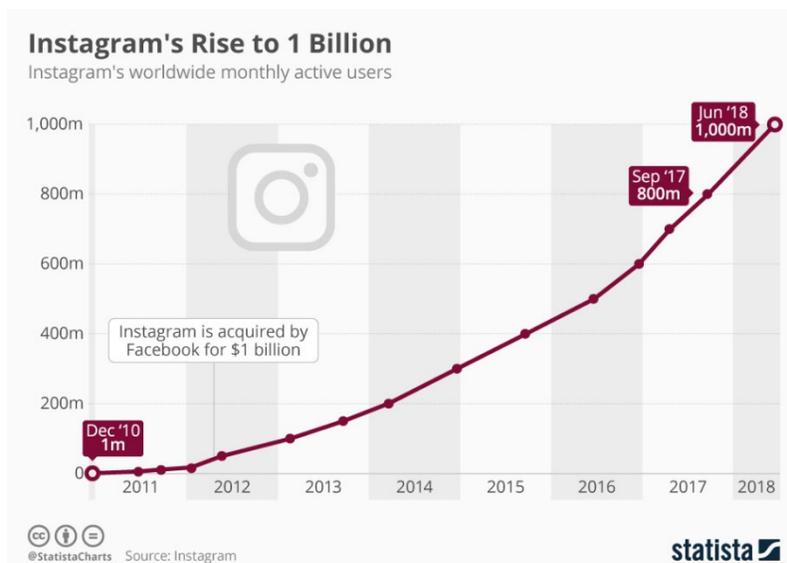
**A. The teen girl suicide crisis.**

The relationship between the unprecedented spike of teen girls killing themselves and social media use is illustrated by the following two charts. Note the year 2011 in each.

**INCREASES IN DEPRESSION, SELF-HARM,  
AND SUICIDE AMONG U.S. ADOLESCENTS**  
**FIGURE 1. Indicators of poor mental health  
among U.S. girls and young women, 2001–2018**  
**(note, before COVID)**



Jean M. Twenge, *Increases in Depression, Self-Harm, and Suicide Among U.S. Adolescents After 2012 and Links to Technology Use: Possible Mechanisms*, 2 *Psychiatric Rsch. & Clinic Prac.* (Summer 2020), at 19-25. <https://tinyurl.com/y4bb273d>



Felix Richter, *Instagram's Rise to 1 Billion*, Staista (Jun. 21, 2018), <https://tinyurl.com/2rmms6wd>

Research affirms the cause-and-effect relationship between these charts. Excessive use of digital and social media has a documented relationship to increases in suicide-related outcomes in teens and children, such as suicidal ideation, plans, and attempts. Elizabeth J. Ivie et al., *A Meta-Analysis of the Association Between Adolescent Social Media Use and Depressive Symptoms*, 275 *J. of Affective Disorders* 165, 165-174 (2020), <https://tinyurl.com/bdzu6h8h>; Alan Mozes, *As Social Media Time Rises, So Does Teen Girls' Suicide Risk*, U.S. News (Feb. 16, 2021), <https://tinyurl.com/49hzm9v>.

Fifty-nine percent of U.S. teens have reported being bullied on social media, and 25 % of 9- to 17-year-olds report having had an online sexually explicit interaction with someone they believed to be an adult. Monica Anderson, *A Majority of Teens Have Experienced Some Form of Cyberbullying*, Pew Rsch. Ctr. (Sept. 27,

2018); *Responding to Online Threats: Minors' Perspectives on Disclosing, Reporting, and Blocking*, Thorn (May 2021).

Research from maybe the world's foremost authority on social media – Facebook -- conclusively reinforces these conclusions. Whistleblower and former Facebook executive Frances Haugen testified that this single company with over 70% of the social media market<sup>16</sup> knows it is increasing the risk that some children – especially girls – will kill themselves.

Haugen leaked internal Instagram research concluding (these are Facebook's words):

- “Among teen users [of Instagram] who reported suicidal thoughts, 13% of British users and 6% of American [teen] users traced the desire to kill themselves to Instagram.” Georgia Wells et al., *Facebook Knows Instagram Is Toxic for Teen Girls, Company Documents Show*, Wall St. J. (Sept. 14, 2021), <https://tinyurl.com/4dzt4zp3>.
- “Teens blame Instagram for increases in the rate of anxiety and depression . . . This reaction was unprompted and consistent across all groups.” *Id.*

Why the spike in teen girl suicide specifically? Facebook's own research provides the answer: “We make body image issues worse for one in three teen girls,” said one leaked Facebook slide from 2019. *Spence v. Meta Platforms*, No. 3:22-cv-03294 at 9 (N.D. Cal. June 6, 2022) (citing *Facebook Papers: Teen Girls Body Image and Social Comparison on Instagram – An*

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<sup>16</sup> *Leading Social Media Websites in the United States as of September 2022, Based on Share of Visits*, Statista (Oct. 2022), <https://tinyurl.com/2zhh9zew>.

*Exploratory Study in the U.S.*, Wall St. J. (Mar. 2020), at 8).<sup>17</sup>

Because platforms know teenage girls disproportionately engage with this type of content, even minor users who do not express interest in these topics are often delivered this content.” Fabrizio Bert et al., *Risks and Threats of Social Media Websites: Twitter and the Proana Movement*, *Cyberpsych. Behav. Soc. Network* 233, 233-38 (2016), <https://tinyurl.com/mr47wryw>. Thus, when one child advocacy nonprofit recently registered a TikTok account for a fictitious 14-year-old, they quickly were delivered videos advertising breast enhancement and weight loss patches—without having followed any other accounts or having searched for terms related to these topics.” *Petition for Rulemaking to Prohibit the Use on Children of Design Features that Maximize for Engagement*, Fed. Trade Comm’n (Nov. 17, 2022) at 10, <https://tinyurl.com/3mursy95>.<sup>18</sup>

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<sup>17</sup> Research outside of Facebook’s own studies show that social media platforms’ content selection algorithms over and over push body image-distorting, eating disorder-promoting content and harmful diet products and strategies to teen girls, some as young as 14. Jim Waterson & Alex Hern, *Instagram ‘Pushes Weight-Loss Messages to Teenagers’*, *The Guardian* (Jul. 19, 2021), <https://tinyurl.com/2ya2ecdu>. A study of 7th and 8th graders published in 2019 in the *International Journal of Eating Disorders* “suggest[ed] that [social media], particularly platforms with a strong focus on image posting and viewing, is associated with elevated [disordered eating] cognitions and behaviors in young adolescents.” Simon M. Wilksch et al., *The Relationship Between Social Media Use and Disordered Eating in Young Adolescents*, 53 *Int. J. Eating Disorders* 96, 104 (Dec. 2019), <https://tinyurl.com/32s2rr96>.

<sup>18</sup> Moreover, “[g]reater social media engagement with unhealthy food brands by non-Hispanic Black and less-acculturated Hispanic adolescents also raises concerns due to diet-related health disparities affecting communities of color.” All of this is troubling as

## **B. The teen girl crisis in sexual trafficking.**

U.S. federal criminal court sex trafficking cases in 2020 showed that 98% of victims of sex trafficking were female. Julene Reese, *Utah Girls, Women Not Immune to Human Trafficking, USU UWLP Reports*, Utah State Univ. (Apr. 6, 2022), <https://tinyurl.com/4r7tcv6p>. The average age of child sex trafficking victims is 13-15. *Facts & Figures*, Youth Underground, <https://tinyurl.com/ypmfm3cz> (last visited Nov. 19, 2022). Keeping these children away from their exploiters is a life-and-death matter for them as “the average life expectancy of an exploited child is a shockingly short time: seven years. Homicide and HIV/AIDS account for a majority of the deaths.” Kate Walker, *Ending The Commercial Sexual Exploitation of Children: A Call For Multi-System Collaboration in California*, California Child Welfare Council (2013) at 15.

An astonishing 65% of underage sexual trafficking victims recruited online in active criminal sex trafficking cases in 2020 were recruited through Facebook, while 14% were recruited through Instagram, and 8% were recruited through Snapchat. *How Sex Traffickers Use Social Media to Contact, Recruit, and Sell Children*, Fight the New Drug (Aug. 11, 2021), <https://tinyurl.com/2p93eeam>.

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recent data from the National Health and Nutrition Examination Survey (NHANES) demonstrates skyrocketing obesity, especially in children of color, as 16% of non-Hispanic white teens are obese, 28% of non-Hispanic black teens and 30.5% of Mexican-American teens are obese. Frances Fleming-Milici & Jennifer L. Harris, *Adolescents' Engagement with Unhealthy Food and Beverage Brands on Social Media*, 146 *Appetite* 1-8 (2020), <https://doi.org/10.1016/j.appet.2019.104501>.

Facebook has known about human traffickers using its products since at least 2018, leaked documents show. The trafficking got so bad that in 2019, Apple threatened to pull Facebook and Instagram’s access to the App Store, a platform the social media giant relies on to reach hundreds of millions of users each year. Clare Duffy, *Facebook Has Known It Has a Human Trafficking Problem For Years. It Still Hasn’t Fully Fixed It*, CNN (Oct. 25, 2021), <https://tinyurl.com/4zhfy3b5>.

“A report distributed internally [within Facebook] in January 2020 found that ‘our platform enables all three stages of the human exploitation lifecycle (recruitment, facilitation, exploitation) via complex real-world networks[.]’” *Id.*

Multiple investigative reports have documented how TikTok permits users to urge children to commit sexual or sexualized acts. For example, in 2022:

A Forbes review of hundreds of recent TikTok livestreams reveals how viewers regularly use the comments to urge young girls to perform acts that appear to toe the line of child pornography — rewarding those who oblige with TikTok gifts, which can be redeemed for money, or off-platform payments to Venmo, PayPal or Cash App accounts that users list in their TikTok profiles. It’s ‘the digital equivalent of going down the street to a strip club filled with 15-year-olds,’ says Leah Plunkett, an assistant dean at Harvard Law School and faculty associate at Harvard’s Berkman Klein Center for Internet & Society, focused on youth and media.

“Clearly, what once was improbable [about sex trafficking of children] has been made possible through social media.” *How Sex Traffickers Use Social Media to Contact, Recruit, and Sell Children*, Fight the New Drug (Aug. 11, 2021), <https://tinyurl.com/2p93eeam>.

### **C. Children clinically addicted to social media.**

“[A]dolescence is[]associated with an increased risk for[]addictive disorders.” Christopher J. Hammond et al., *Neurobiology of Adolescent Substance Use and Addictive Behaviors: Prevention and Treatment Implications*, 25(1) *Adolesc. Med. State Art. Rev.* 15, 15-32 (2015), <https://tinyurl.com/ypw85nht>.

Platforms sometimes copy techniques used in gambling. Daniel Kruger, *Social Media Copies Gambling Methods ‘To Create Psychological Cravings’*, Univ. of Mich. Inst. For Healthcare Pol’y & Innovation (May 8, 2018), <https://tinyurl.com/yc26j7js>. They recommend video after video without stopping cues, which are especially problematic for youth who may not yet have the self-discipline and maturity to take a break. Julia Jargon, *TikTok Brain Explained: Why Some Kids Seem Hooked on Social Video Feeds*, *Wall. St. J.* (Apr. 2, 2022), <https://tinyurl.com/2p8xydhw> (“The dopamine rush of endless short videos makes it hard for young viewers to switch their focus to slower-moving activities. ‘We’ve made kids live in a candy store.’”).

“TikTok is a dopamine machine,” said John Hutton, a pediatrician and director of the Reading & Literacy Discovery Center at Cincinnati Children’s Hospital. Julia Jargon, *TikTok Brain Explained: Why Some Kids Seem Hooked on Social Video Feeds*, *Wall. St. J.* (Apr. 2, 2022), <https://tinyurl.com/2p8xydhw>.

These techniques cause addiction, in the medical sense of the word, among untold numbers of children. Facebook itself documented this in leaked research, as seen in the research slide reproduced in the Appendix which concludes that children they surveyed had “[a]n addict’s narrative about their use”: As Facebook whistleblower Frances Haugen explained:

Facebook has studied a pattern that they call problematic use, what we might more commonly call addiction. It has a very high bar for what it believes [“problematic use”] is. It [means] you self-identify that you don’t have control over your usage and that it is materially harming your health, your schoolwork or your physical health.

Georgia Wells et al., *Facebook Knows Instagram Is Toxic For Teen Girls, Company Documents Show*, Wall St. J. (Sept. 14, 2021), <https://tinyurl.com/4dzt4zp3>. Facebook’s internal definition of “problematic use” is identical to the medical definition of behavioral “addiction”: I know it is bad for me, it is objectively hurting me, I want to stop, but I can’t.<sup>19</sup>

Others in addition to those employed by Facebook who have studied social media come to the same conclusion about child addiction and social media with, for example, the United States Senate Republican Policy Center publishing a white paper titled “Social

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<sup>19</sup> See Cecilie Schou Andreassen et al., *The Relationship Between Addictive Use of Social Media, Narcissism, and Self-Esteem: Findings From a Large National Survey*, 64 ADDICTIVE BEHAV. 287, 289-92 (2017), <https://tinyurl.com/yy7v2hcx> (employing general diagnostic addiction criteria in finding relationships between basic demographic variables and personality traits and social media addiction).

Media and Mental Health” where the Center described social media as “An Addiction Machine” and stated that “[o]ne former Facebook executive, who quit the company and doesn’t allow his children to use social media, has said, ‘the short-term, dopamine-driven feedback loops that we have created are destroying how society works.’” *Social Media and Mental Health*, Senate Republican Pol’y Ctr. (Oct. 5, 2021), <https://tinyurl.com/3yn5vv57> (citing Amy Wang, *Former Facebook VP Says Social Media Is Destroying Society With Dopamine-Driven Feedback Loops*, Wash. Post (Dec. 12, 2017), <https://www.washingtonpost.com/news/the-switch/wp/2017/12/12/former-facebook-vp-says-social-media-is-destroying-society-with-dopamine-driven-feedback-loops/>).

It is not the solitary uploader of video content who is “destroying how society works.”

In an acknowledgement that their own stand-alone inventions can be an independent source of harm to children entirely apart from third-party content, some platforms lately are promising changes, at least as applied to children. Thus, Google has recently promised to turn off “autoplay” by default on accounts of people who say they are under 18. James Beser, *New Safety and Digital Wellbeing Options for Younger People on YouTube and YouTube Kids*, YouTube Official Blog (Aug. 10, 2021), <https://tinyurl.com/3yhub6fr>. And, TikTok says it will now not allow users who say they are between 13 to 15 to receive push notifications after 9 p.m. Faith Karmimi, *TikTok Disables Late-Night Notifications for Teens as Part of New Safety Measures*, CNN (Aug. 12, 2021), <https://tinyurl.com/2hhptv2n>. TikTok also promises to allow users to schedule reminders to take a break from the platform. Queenie Wong, *TikTok Wants to Remind*

*You to Take Breaks From the App*, CNET (Jun. 9, 2022), <https://tinyurl.com/3y4ayvs5>.

### CONCLUSION

To ensure that courts are not inadvertently offering more immunity to social media platforms than Congress intended when it enacted section 230(c)(1), to the profound detriment of our children, courts should carefully distinguish between those harms allegedly caused, in whole or in part, by the multifaceted, stand-alone machine that structures and delivers content, and those harms allegedly caused by the content in and of itself. Congress intended to immunize platforms for the latter but not the former. If being able to distinguish the harms turns on “it depends” considerations, as may often be the case with the machines involved here, then Rule 12(b)(6) motions should be denied in favor of courts surgically effectuating the text and intent of the law on the basis of hard facts and a full record.

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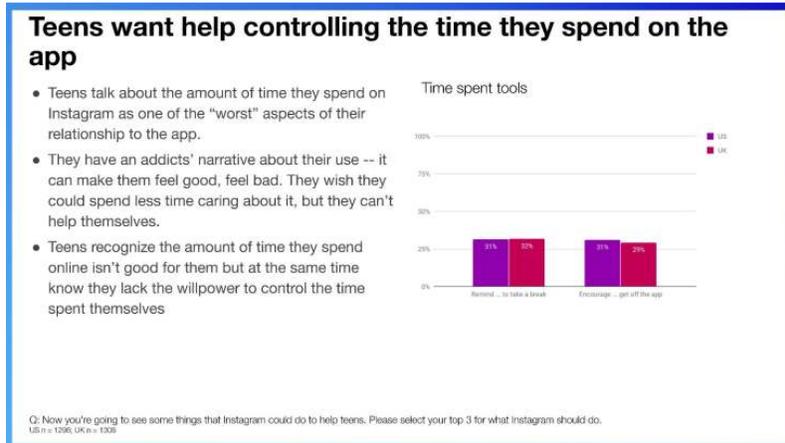
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## **APPENDIX**

1a  
APPENDIX



All the leaked internal Facebook slides documenting the platform's secret internal research on the impact of Instagram on children, including this one, can be found here: <https://tinyurl.com/5n6b65mv>.