From: Moore, Robin
Sent: Tue, 23 Mar 2021 20:08:57 +0000
To: Kopec, Janice; King, Austin; Perkins, Rhonda
Cc: Kaufman, Daniel
Subject: (b)(5)
Attachments:

Janice, Austin, Rhonda –

(b)(5)

We look forward to your thoughts.

Best,
Robin

Robin L. Moore
Acting Chief of Staff
Bureau of Consumer Protection
Federal Trade Commission
600 Pennsylvania Avenue, NW, (b)(6)
Washington, DC 20580
(202) 326-2167

From: Zylberglait, Pablo
Sent: Thu, 2 Dec 2021 13:37:47 +0000
To: Kalepe, Roland
Cc: Batal, Mohamad; Bumpus, Jeanne; Christie, Joel; Coppola, Maria; Crawford, Molly; Delaney, Elizabeth A; Dolan, Reilly; Estrada, Danielle; Freer, Daniel R.; Gorman, Frank; Howard, Jennifer; Kaplan, Peter P.; King, Austin; Kopec, Janice; Koulousias, Amanda; Kryzak, Lindsay; Laroia, Gaurav; Levine, Samuel; Lezaja, Michael; Liu, Josephine; Moore, Robin; Perkins, Rhonda; Pesin, Michael; Runco, Philip; Simons, Claudia A.; Spector, Robin; Tabor, April; Vaca, Monica E.; Vandecar, Kim; Wayne, Catherine; White, Katherine; Zhao, Daniel
Subject: (b)(5) Letter from Rep. Crist re: Spanish-language content moderation
Attachments: Crist FTC Spanish Misinformation.pdf

Hi Roland,

Please assign this (b)(5) letter as follows:

From	To	Regarding	Commission approval	Deadline	Who signs	Link
Rep. Crist	BCP (Robin Moore)	Spanish-language content moderation	No	Wednesday, December 22, 2021	Chair Khan	(b)(5); (b)(3):FISMA 44 USC 3555(f)

Thanks,

Pablo

CHARLIE CRIST
13TH DISTRICT, FLORIDA
www.crist.house.gov

215 CANNON HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-5961

696 1ST AVENUE NORTH, SUITE 203
ST. PETERSBURG, FL 33701
(727) 318-6770

Congress of the United States
House of Representatives
Washington, DC 20515–0913

APPROPRIATIONS COMMITTEE
SUBCOMMITTEES:
DEFENSE
COMMERCE, JUSTICE, SCIENCE
MILITARY CONSTRUCTION, VETERANS AFFAIRS AND RELATED AGENCIES

SCIENCE, SPACE, AND TECHNOLOGY COMMITTEE
SUBCOMMITTEES:
SPACE AND AERONAUTICS
ENVIRONMENT

December 1, 2021

The Honorable Lina Khan, Chair
Federal Trade Commission
600 Pennsylvania Ave, N.W.
Washington, D.C. 20580

Dear Chair Khan,

I write to you to today to highlight an October 28th article in the *Washington Post* titled "Misinformation online is bad in English. But it's far worse in Spanish."[1] I have been concerned for some time about the spread of misinformation online but was especially disturbed to read that Spanish-language posts are less moderated and left up longer than those in English.

As with any problem, it is crucial to start with the facts. Unfortunately, there is simply a dearth of data related to Spanish-language content moderation online. As it stands now, policymakers are left to rely on statements from social media platforms on their content moderation practices and testimony from whistleblowers like Frances Hauge. Sadly, those only pertain to content in English. Additional data is needed to understand the scope of the problem and how to tackle it.

As you know, Section 6(b) of the Federal Trade Commission Act empowers the FTC to require companies to file "reports or answers in writing to specific questions" about its business practices – as the FTC did with Amazon, TikTok, Facebook, Reddit, Snap, Twitter, WhatsApp, and YouTube in December 2020. Additionally, in April of this year, FTC Acting Chairwoman Rebecca Kelly Slaughter testified before Congress on the agency's recent enforcement actions, including filing more than a dozen law enforcement cases against individuals who participated in selling fraudulent COVID products. I applaud these initial efforts and ask that the FTC redouble its inquires, specifically as it pertains to misinformation in Spanish-language content online and in radio and television advertising.

In addition, it would be instructive to know specific metrics on how many Spanish-language posts were flagged or taken down compared to posts in English, and how many Spanish-speaking content moderators are employed at each of the above listed social media companies. Given the lack of information on Spanish-language content moderation, I am requesting the FTC compile this information and provide it to Congress, as it would prove useful for either future enforcement or legislation to safeguard families from misinformation.

I thank you again for all of your efforts to date and look forward to receiving the data you compile so that we can work together to combat the scourge of misinformation.

Sincerely,

Charlie Crist
UNITED STATES CONGRESSMAN

[1] https://www.washingtonpost.com/outlook/2021/10/28/misinformation-spanish-facebook-social-media/

From: King, Austin (he/him)
Sent: Thu, 16 Mar 2023 08:48:09 +0000
To: Slaughter, Rebecca
Subject: RE: Bullets on OCM items
Attachments: (b)(5)

(b)(5)

(b)(5)

From: King, Austin (he/him)
Sent: Wednesday, March 15, 2023 5:07 PM
To: Slaughter, Rebecca <rslaughter@ftc.gov>
Cc: Laroia, Gaurav <glaroia@ftc.gov>
Subject: Bullets on OCM items

Hi, Becca:

(b)(5)

(b)(5)

Thanks!
Austin

From: Kopec, Janice
Sent: Wed, 1 Jun 2022 18:23:05 +0000
To: Slaughter, Rebecca
Subject: (b)(5)
Attachments: (b)(5)

(b)(5)

(b)(5)

From: Kopec, Janice
Sent: Tuesday, May 24, 2022 7:01 PM
To: Slaughter, Rebecca <rslaughter@ftc.gov>
Subject: (b)(5)

(b)(5)

From: Kopec, Janice
Sent: Mon, 17 May 2021 21:43:26 +0000
To: Slaughter, Rebecca
Subject: FW: Final Review: Needed Resources and Overview
Attachments: DRAFT-FY22 CBJ Needed Resources_Overview_20210517.docx

(b)(5)

From: Hale, James <jhale@ftc.gov>
Sent: Monday, May 17, 2021 4:59 PM
To: Kopec, Janice <jkopec@ftc.gov>
Cc: Rebich, David <drebich@ftc.gov>; Walsh-Van Wey, Lori <lwalshvanwey@ftc.gov>
Subject: Final Review: Needed Resources and Overview

(b)(5)

Let me know if you have any questions.

Many thanks,
James

From: Batal, Mohamad
Sent: Fri, 6 May 2022 20:59:22 +0000
To: Slaughter, Rebecca; Kopec, Janice; Laroia, Gaurav
Subject: FW (b)(5) etter from Reps. Butterfield, Aguilar, and Leger Fernandez re: bots and fake accounts affecting elections
Attachments: FTC Letter.pdf

Hey Becca—Please see the attached (b)(5) letter about bots, fake accounts, and elections.

Thanks,
Moh

From: Zylberglait, Pablo <PZYLBERGLAIT@ftc.gov>
Sent: Friday, May 6, 2022 8:40 AM
To: Kalepe, Roland <rkalepe@ftc.gov>
Cc: Alan, Laura <lalan@ftc.gov>; Batal, Mohamad <mbatal@ftc.gov>; Bumpus, Jeanne <JBumpus@ftc.gov>; Christie, Joel <JCHRISTIE@ftc.gov>; Coppola, Maria <mcoppola@ftc.gov>; Crawford, Molly <mcrawford@ftc.gov>; Dasgupta, Anisha <adasgupta@ftc.gov>; Delaney, Elizabeth A <EDELANEY@ftc.gov>; Dolan, Reilly <JDOLAN@ftc.gov>; Estrada, Danielle <destrada@ftc.gov>; Freer, Daniel R. <dfreer@ftc.gov>; Howard, Jennifer <jhoward1@ftc.gov>; Kaplan, Peter P. <pkaplan@ftc.gov>; King, Austin (he/him) <aking3@ftc.gov>; Kopec, Janice <jkopec@ftc.gov>; Koulousias, Amanda <akoulousias@ftc.gov>; Laroia, Gaurav <glaroia@ftc.gov>; Levine, Samuel <slevine1@ftc.gov>; Lezaja, Michael <mlezaja@ftc.gov>; Liu, Josephine <jliu1@ftc.gov>; Moore, Robin <rmoore@ftc.gov>; Perkins, Rhonda <rperkins@ftc.gov>; Robinson, Carolyn L. <crobinson@ftc.gov>; Runco, Philip <prunco@ftc.gov>; Simons, Claudia A. <CSIMONS@ftc.gov>; Spector, Robin <rspector@ftc.gov>; Tabor, April <atabor@ftc.gov>; Unruh, Rebecca <runruh@ftc.gov>; Vaca, Monica E. <MVACA@ftc.gov>; Vandecar, Kim <KVANDECAR@ftc.gov>; Wayne, Catherine <cwayne@ftc.gov>; White, Katherine <kwhite@ftc.gov>; Wilson, Christine <cwilson3@ftc.gov>; Zhao, Daniel <dzhao@ftc.gov>
Subject: (b)(5) etter from Reps. Butterfield, Aguilar, and Leger Fernandez re: bots and fake accounts affecting elections

Hi Roland,

Please assign this (b)(5) etter as follows:

From	To	Regarding	Commission approval	Deadline	Who signs	Link
Reps. Butterfield, Aguilar, and Leger Fernandez	BCP (Robin Moore)	Use of bots and fake accounts, particularly as they relate to	No	Thursday, May 26, 2022	Chair Khan	(b)(5); (b)(3):FISMA 44 USC 3555(f)

		federal elections.				

Thanks,

Pablo

One Hundred Seventeenth
Congress of the United States
House of Representatives

COMMITTEE ON HOUSE ADMINISTRATION
1309 LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, DC 20515–6157
202–225–2061 | CHA.HOUSE.GOV

May 5, 2022

Lina Khan
Chairperson
Federal Trade Commission
600 Pennsylvania Avenue, NW
Washington, DC 20580

Chairperson Khan:

As members of the Committee on House Administration Subcommittee on Elections, we are concerned about the use of fake and automated accounts, known as bots, to disseminate election-related mis- and disinformation on social media platforms. Indeed, a study conducted by the University of Southern California during the lead up to the 2020 election found that thousands of bots were posting about the two presidential candidates and their campaigns on Twitter. The study found that the bots "exacerbate the consumption of the content within the same political chamber, so it increases the effect of the echo chamber."[1] Moreover, an internal Facebook memo written in March 2021 revealed the company's ability to detect anti-vaccine rhetoric and misinformation was "basically non-existent" in non-English comments.[2] Frances Haugen, a former Facebook employee turned whistleblower, said that the company spends 87 percent of its misinformation budget on U.S. content.[3]

The Federal Trade Commission has an opportunity to exercise its authority to address some of the market issues related to bots and fake accounts, particularly those with a nexus to federal elections. Several proposals were contained in a July 16, 2020, statement, "Regarding the Report to Congress on Social Media Bots and Deceptive Advertising Commission File No. P204503," from former Commissioner Rohit Chopra.[4]

---

[1] Emily Gersema, *Election 2020 chatter on Twitter busy with bots and conspiracy theorists*, USC NEWS (Oct. 28, 2020), *available at* https://news.usc.edu/177963/election-2020-twitter-social-media-bots-foreign-interference-usc-study/

[2] Amanda Seitz and Will Weissert, *Inside the 'big wave' of misinformation targeted at Latinos in Florida, elsewhere*, ORLANDO SENTINEL (Nov. 29, 2021), https://www.orlandosentinel.com/politics/os-ne-inside-the-big-wave-of-misinformation-targeted-at-latinos-20211129-arlx66zghbavtg2my4hutqj44u-story.html.

[3] *Id.* An analysis done by online activist group Avaaz, found that Facebook failed to flag 70 percent of Spanish-language misinformation surrounding COVID-19 compared to just 29 percent of such information in English. *Id.*

[4] Statement of Commissioner Rohit Chopra, "Regarding the Report to Congress on Social Media Bots and Deceptive Advertising Commission File No. P204503," July 16, 2020, *available at* https://www.ftc.gov/system/files/documents/public_statements/1578231/social_bots_chopra_statement.pdf.

We are interested to learn whether the Commission has considered exercising the authority outlined by former Commissioner Chopra. Specifically, we would like the Commission to answer the enclosed questions.

Thank you in advance for your assistance with this matter. We respectfully request your responses by May 20, 2022. If you have any questions regarding this request, please contact Committee staff at (202) 225-2061.

Sincerely,

G. K. Butterfield	Pete Aguilar	Teresa Leger Fernández
Chair	Member	Member
Subcommittee on Elections	Subcommittee on Elections	Subcommittee on Elections

cc: The Honorable Zoe Lofgren, Chairperson
Committee on House Administration

The Honorable Darren Soto
Member of Congress, Florida's 9th Congressional District

The Honorable Nanette Barragán
Member of Congress, California's 44th Congressional District

QUESTIONS

1. Has the Commission studied, or does it plan on studying, the impact that bots and fake accounts have on political advertisements, including advertisements by candidates, elected officials, and issue-based political organizations, on social media platforms? If so, please provide details on any studies or actions you have undertaken.

2. One of the ways social media platforms generate revenue is through digital advertising on their platforms. Platforms provide to advertisers information about the potential reach and engagement of advertisements on their platform, as well as impression data for any given ad. In addition to impacting the spread of election-related disinformation, bots and fake accounts can also artificially inflate engagement and impression data. If platforms are providing false or unsubstantiated information, for example, impression data inflated by bots, that could potentially be a violation of the Federal Trade Commission Act's prohibition on deceptive acts or practices.

    a. Has the Commission considered using its authority under the Act to assess the validity of social media companies claims to advertisers about potential reach and engagement of advertisements on their platform?

    b. Has the Commission considered using its authority under the Act to assess the validity of social media companies claims regarding the impression data of advertisements on their platforms?

3. The sale of fake followers can influence the spread of disinformation on social media platforms by increasing the perceived influence of individuals promoting false information. In 2019, the Commission announced an enforcement action against Devumi, which was "a company that sold fake subscribers, views, and likes, to people trying to artificially inflate their social media presence."[5] Since that enforcement action, what work has the Commission done to deter companies selling fake followers?

4. Election related disinformation is not just spreading in English, it is also being shared to a wide audience in languages other than English. What has the Commission done to study the existence and impact of social media bots and fake accounts that interact with posts or post in languages other than English?

[5] Federal Trade Commission Report to Congress, "Social Media Bots and Deceptive Advertising," July 16, 2020.

From: Laroia, Gaurav
Sent: Thu, 29 Jul 2021 16:01:40 +0000
To: Slaughter, Rebecca
Cc: Kopec, Janice
Subject: FW: Letter to the FTC Commissioners on Civil Rights and Privacy
Attachments: Letter to the FTC - Civil Rights and Privacy.pdf

Letter from more civil society groups asking for a rulemaking. (b)(5)
Many of these folks will be presenting tomorrow at the meeting with Sam and Erie.

From: Howard, Jennifer <jhoward1@ftc.gov>
Sent: Thursday, July 29, 2021 11:41 AM
To: Sara Collins (b)(6) @publicknowledge.org>
Cc: Meyer, Erie K <emeyer@ftc.gov>; Laroia, Gaurav <glaroia@ftc.gov>; Spector, Robin <rspector@ftc.gov>; David Brody (b)(6) @lawyerscommittee.org>; Dahdouh, Thomas N. <TDAHDOUH@ftc.gov>
Subject: Re: Letter to the FTC Commissioners on Civil Rights and Privacy

Hi Sara-

Thanks so much for sending. Look forward to discussing further and will be in touch!

Jen Howard
Chief of Staff
Federal Trade Commission
E: jhoward1@ftc.gov
O: 202-326-2408

On Jul 29, 2021, at 11:38 AM, Sara Collins (b)(6) @publicknowledge.org> wrote:

Hello,

Please find attached a letter to the Commissioners signed by twenty-five civil rights, consumer protection, and public advocacy organizations asking the FTC to address a variety of harms caused by big tech data practices. We are asking that the FTC (1) address any unfair and deceptive practices with all regulatory tools available, including rulemaking; (2) create an Office of Civil Rights; and (3) commit more resources to enforcing against civil rights and privacy UDAPs.

If you have any questions about the letter please email myself or David Brody.

Thank you for your time,

Sara Collins

--

Sara Collins
Policy Counsel
(b)(6) @publicknowledge.org
(b)(6)

Public Knowledge | @publicknowledge | www.publicknowledge.org
1818 N St. NW, Suite 410 | Washington, DC 20036

<Letter to the FTC - Civil Rights and Privacy.pdf>

Chair Lina Khan
Commissioner Rohit Chopra
Commissioner Rebecca Slaughter
Commissioner Noah Phillips
Commissioner Christine Wilson

Federal Trade Commission
600 Pennsylvania Ave., N.W.
Washington, D.C. 20580

Chair Khan and Commissioners Chopra, Slaughter, Phillips, and Wilson:

We, the undersigned civil rights, civil liberties, and consumer protection organizations, write to bring your attention to the urgent need for the Federal Trade Commission to protect civil rights and privacy in data-driven commerce. The Internet is an irreplaceable venue for free expression, trade, employment and housing opportunities, banking, education, entertainment, and, of course, civic engagement. As courts have recognized for decades and recently reaffirmed, privacy rights are civil rights[1] and commercial data practices are inextricably intertwined with equal opportunity.[2]

We ask the FTC to (1) initiate rulemaking and take other appropriate actions to regulate unfair and deceptive commercial data practices such as those discussed below; (2) create an Office of Civil Rights; and (3) commit greater resources to aggressively enforce against unfair and deceptive practices. We urge the FTC to use all tools at its disposal.

Unfair and Deceptive Commercial Data Practices Cause Substantial Harm

As has been extensively documented by independent researchers, journalists, courts, companies, and this Commission, unfettered data practices employed single-mindedly for private gain cause significant harm to the public. Tech companies directly cause or contribute to many of these harms. Like the sprawling consequences of historic redlining, other harms arise as negative externalities (including downstream effects) from data-exploitative business models and the market incentives they create. Addressing direct harms and changing incentives will have positive effects for the Internet ecosystem as a whole.

---

[1] *See Am. for Prosperity Found. v. Bonta*, __ S.Ct. __, 2021 WL 2690268, *6 (July 1, 2021) (discussing *NAACP v. Alabama*, 357 U.S. 449 (1958)).

[2] *See Leaders of a Beautiful Struggle v. Baltimore Police Dept.*, __ F.4th __, 2021 WL 2584408, *14 (4th Cir. June 24, 2021) (en banc) (Gregory, C.J., concurring) (discussing how past redlining of Baltimore continues to affect resource distribution and public well-being, including "investment in construction; urban blight; real estate sales; household loans; small business lending; public school quality; access to transportation; access to banking; access to fresh food; life expectancy; asthma rates; lead paint exposure rates; diabetes rates; heart disease rates" and more.).

Harms to Civil Rights and Equal Opportunity

1) Automated decision-making systems produce and reproduce new and longstanding patterns of discrimination in recruiting, employment, finance, credit, housing, K-12 and higher education, policing, probation, healthcare, as well as the promotion of key services through digital advertising.

    a. Ex.: Facebook has been sued by advocates and the U.S. government for enabling discrimination by allowing advertisers to restrict ad viewership by race, religion, national origin, and other protected characteristics. Google and Twitter have similarly been investigated by HUD for housing discrimination.

2) Unscrupulous political operatives and foreign adversaries have used conventional advertising and targeting tools on social media platforms to interfere with U.S. elections and engage in voter suppression. Social media plays a key role in disinformation campaigns that spread conspiracy theories, threaten election integrity, and lead to violence such as the January 6 attack on the U.S. Capitol.

3) Disinformation campaigns in non-English languages are particularly rampant due to disregard by major platforms such as Facebook. The ability to target these types of campaigns depends on the privacy-invasive architecture of social media platforms.

4) Platform design choices routinely enable discrimination within important consumer services and workplaces.

    a. Ex: Airbnb enabled landlords to reject prospective guests with what were perceived to be distinctly Black names at higher rates than guests with what were perceived to be distinctly white names.

    b. Ex: Uber enabled drivers to discriminate against passengers with what were perceived to be distinctly Black names and provide more expensive services to women passengers. Uber likewise used biased consumer-reviews to make workplace decisions that may violate civil rights.

5) Social media firms' algorithmic design choices create pathways to white supremacy, which can lead to violence and deprivation of civil rights.

    a. Ex: An internal Facebook study obtained by the Wall Street Journal noted that "64% of extremist group joins are due to our recommendation tools...our recommendation systems grow the problem."

    b. Ex: YouTube video recommendations systemically recommend harmful and progressively more extreme content to viewers, creating pathways to radicalization.

6) Firms reify and advance existing social prejudices, particularly racism, throughout technology and online services, including through search engine and other predictive

text results, voice technologies, facial analysis, and other biometric and visual processing techniques.

7) Workers are increasingly monitored through digital surveillance programs in and beyond the place of employment, raising novel questions as to whether and how these applications enable exploitation and discrimination. Tech firms dehumanize workers through intrusive surveillance and intermediating working relationships with opaque, sometimes degrading workplace management software.

8) Delivery service drivers protested a nearly-invisible method of pay calculation that put customers' tips toward guaranteed minimum wages.

9) Platform companies use "psychological tricks" on workers, not dissimilar to the dark patterns used on consumers, to maximize company growth.

10) Facial recognition and other biometric surveillance technologies erode civil liberties, particularly for Black and Brown communities. The biases in these technologies and their use by law enforcement have led to traumatic violations of civil liberties, including a number of recent wrongful arrests of innocent Americans misidentified by faulty facial recognition software.

11) Ambient state and private surveillance in public spaces has a chilling effect on basic freedoms and disproportionately affects Black and Brown communities.

Harms to Consumer Protection and Invasions of Privacy

1) Digital firms employ "dark pattern" techniques to confuse and exploit consumers, including intentionally complicating the process of opting-out of data collections.

2) Digital firms use similar designs to trick consumers into sharing personal data or buying services they may not want.

3) Digital firms use similar designs to obscure pricing and fee structures for services up front.

4) Digital firms use similar designs and practices to make it difficult for consumers to change privacy settings, delete accounts, or cancel services.

5) Amazon has labeled as "Amazon's Choice" or sold from its warehouses products that are deceptively labeled, or have been declared unsafe or banned by federal regulators.

6) E-commerce sites like Amazon and Google have continued to sell items they promised to ban, such as pill presses that have been used to manufacture counterfeit prescription drugs or firearm accessories.

7) Millions of businesses listings on mapping sites are fraudulent with analysts cited by the WSJ estimating up to 11 million listings on Google maps may be false listings.

8) Negligence and lax safety standards enable bad actors to commit elaborate frauds on digital platforms.

    a. Ex: Various Airbnb scams.

    b. Ex: Applications on smartphone app stores with billions of downloads have been found to be committing ad fraud.

9) Research conducted by Consumer Reports found that nearly half of consumers struggle to distinguish between a paid ad and an objective search result.

10) Large online advertising platforms are combining data with real-world purchasing and customer information to track them across the web and in the physical world.

11) Navigation applications optimize routes for speed regardless of the negative impact on public safety and traffic. Multiple people have been killed by so-called "self-driving" or auto-pilot enabled cars on public roads. Some evidence suggests the entry of a ride-sharing application into a city increases the number of fatal accidents by 3%.

12) Platform transportation companies erode the hard-won public safety protections put in place over decades around seatbelts, child safety seats, distracted driving, helmet-wearing, and more.

13) E-commerce and platform companies whose delivery drivers kill or maim pedestrians refuse to take responsibility for those injuries, despite incentivizing dangerous driving behavior.

    a. Ex: Amazon incentivized drivers to rush through holiday delivery. Upon being sued by the family of a pedestrian who was killed, they claimed: "The damages, if any, were caused, in whole or in part, by third parties not under the direction or control of Amazon.com."

14) Firms' amplification and enabling of public health misinformation at scale has eroded public trust in vaccines and public health officials. Too many American families and their loved ones have been severely harmed by their belief in misinformation, particularly during the COVID-19 pandemic, and vaccine hesitancy remains an issue.

15) Large online advertising platforms like Google have placed ads on sites promoting COVID-19 conspiracy theories in contrast to the commitments they made to combat COVID-19 misinformation.

16) Platform design choices that algorithmically amplify false information and propaganda in order to increase engagement on social media can grossly warp public discourse and understanding around public events, complicating the media landscape for consumers.

17) Firms track Americans in gross detail, relying on contrived interpretations of consumer consent or without explicit consent.

    a. Ex. Mobile phone trackers collect precise location over 14,000 times per day.

18) Firms collect consumer data that they do not need without consent.

19) Firms accept and purchase user data collected by other firms without their consent.

    a. Ex: Facebook received ovulation data from a third party without user consent.

20) Firms collect consumer data under the pretense of consent, perpetuating the fallacy that consumers are in a position to read, understand, or give informed consent (often consumers *must* use services and lack other options or the ability not to consent).

21) Firms use deceptive disclosures and settings to trick consumers into allowing data sharing with third parties.

22) Firms use personal consumer data—including private emails, conversations, and photographs—to develop algorithmic products without full consumer knowledge, consent, or reciprocity.

23) Firms fail to secure or delete obsolete user data, resulting in significant individual and collective costs. While firms may prefer to paint themselves as victims, a more apt metaphor might be oil companies who fail to prevent oil spills.

    a. Ex: Experian's API weakness likely exposed "most Americans'" credit scores, creating a feeding frenzy for identity thieves.

    b. Ex: Popular genetic testing services have insufficient security leading to significant potential for exploitation of genomic and health information.

24) Poor data protection can result in both exploitative and exclusionary conduct.

25) Privacy harms are especially acute in combination with competitive harms: experts have shown that firms that achieve market dominance and successfully suppress competitive threats are able to lower privacy protections to pursue and extract greater data gains from consumers.

    a. Ex: Facebook pivoted away from privacy-protection toward privacy exploitation upon achieving significant market power.

26) Digital firms use unprecedented data collection and targeting tools to exploit behavioral shortcomings and biases amongst consumers in real-time.

27) Digital firms employ a bevy of dynamic pricing strategies, which nearly three-quarters of Americans think is a problem.

FTC Should Regulate and Stop Unfair and Deceptive Commercial Data Practices

The following practices relating to the use of consumers' personal data are unfair or deceptive. They cause many of the harms discussed above, either directly or by causing downstream negative externalities. The FTC should take immediate action to address them using all tools at its disposal, including but not limited to rulemaking.

Civil Rights and Equal Opportunity

1) Using criteria that have the purpose or effect of resulting in adverse eligibility determinations or to target or deliver advertisements for housing, employment, credit, insurance, or educational opportunities on the basis of protected characteristics. This does not include using protected characteristics (a) for legitimate self-testing for the purpose of preventing unlawful discrimination, complying with legal requirements, or assessing diversity, equity, and inclusion programs; or (b) for the bona fide and primary purpose of expanding an applicant, candidate, participant, or customer pool by increasing diversity and inclusion.
2) Using personal data to violate rights protected by federal law, where such rights are capable of being violated by a private actor. This includes using personal data to deprive or defraud someone of the right to vote in violation of federal law.
3) Disclosing non-public information related to an individual's sexual life without specific opt-in consent, such as their sexual activity, relationships, orientation, gender identity or expression, preferences, communications, or behavior. This does not include automated linking to, republishing of, or indexing such information if it was already disclosed by others—such as routine search engine operations.
4) Offering online services that are not accessible to persons with disabilities.
5) Failing to provide disclosures and policies in all languages in which the company routinely provides service.
6) Using machine learning or artificial intelligence technology to process personal data or aggregate data about a population without ensuring, prior to deployment and through regular assessment, that such processing does not directly or indirectly result in adverse eligibility decisions or exclusion from commercial opportunities on the basis of protected characteristics.
7) Using machine learning or artificial intelligence technology in a manner that does not comport with what the technology is marketed or represented to do, if such use causes harm to consumers.
8) Claiming that a product using machine learning or artificial intelligence technology can predict future outcomes with a degree of certainty or accuracy, or predict human behavior at all, if the claimant does not possess reliable evidence that such technology has any such capability greater than a simple linear regression analysis or random chance.

9) Representing that a product using machine learning or artificial intelligence technology has a source, sponsorship, approval, certification, accessories, characteristics, components, uses, or benefits that it does not have, or that such product is of a certain standard, quality, grade, style, or model when it is not.

10) Designing, modifying, or manipulating a user interface of a service, directed at children under the age of 13, with the purpose or substantial effect of cultivating compulsive usage.

11) Using personal data to target or deliver personalized advertisements to children under the age of 13. This does not include contextual advertising.

12) Using personal data to conduct psychological experiments on users without opt-in consent and compliance with best practices for such research, if it is reasonably foreseeable that such experiments may result in harm physical or mental health.

Data Protection

1) Failing to minimize data collection and retention. Collected data should be limited to what is necessary to provide the service requested by the consumer; should not be used for secondary purposes; and should not be retained for longer than is necessary to satisfy the purpose for which it was collected. Secondary uses should not be allowed without additional and specific opt-in consent.

2) Using facial recognition technology on persons in traditional public forums or places of public accommodation without opt-in consent.

3) Collecting, sharing, or otherwise using an individual's biometric data, including but not limited to facial recognition technology, without specific opt-in consent and without a valid business necessity.

4) Disclosing, without authorization or in excess of authorization, the content of a communication to anyone who is not a party to the communication or who does not have authorization to access it, including both state actors and private parties.

5) Collecting sensor recordings of environmental data from a consumer device, in conjunction with personal data, without opt-in consent. This includes data collected by a microphone, camera, or other sensors capable of measuring chemicals, light, radiation, air pressure, speed, weight or mass, positional or physical orientation, magnetic fields, temperature, or sound. This does not include processing by an entity that did not directly collect the data.

6) Collecting personal data as a third party about users of an online service, where such data is not publicly available, without opt-in consent from affected individuals. This includes, for example, cursor movements and clicks, heat maps, in-app activity, location information, third party tracking beacons and cookies, and other third-party methods of tracking user activity.

Due Process

1) Requiring consumers to consent to pre-dispute binding arbitration clauses or class action waivers.
2) Requiring consumers to waive privacy or other rights to obtain service or requiring that consumers who do not waive their rights pay a higher fee. This does not include customer loyalty programs, such as grocery store discount cards.
3) Denying consumers the ability to access, correct, delete, or port their personal data in response to a reasonable request.
4) Failing to provide an effective and prompt appeal when requests to access, correct, delete, or port data are denied.
5) Using dark patterns and other misleading user interfaces to unfairly or deceptively induce consent or other adverse actions from a consumer.

Transparency

1) Failing to affirmatively disclose, in a clear and conspicuous manner, how a data processor collects, uses, shares, and retains personal data, including failing to explain a consumer's ability to control the use of their data.
2) Failing to affirmatively disclose when and how a company uses machine learning or other artificial intelligence technology to process personal data, when such processing affects commercial goods, services, or opportunities that a consumer may receive. This includes failure to disclose non-sensitive information from risk assessments.
3) Failing to conspicuously provide all relevant privacy policies and controls in one place, such as scattering privacy policies, updates, or controls across multiple parts of a website or app. This practice is particularly deceptive when a consumer's intent to change a privacy control in one area can be undermined by failure to change other controls in other areas, and such discrepancy is not conspicuous.
4) Refusing to tell a consumer to whom the company disclosed their personal data, or with whom the company contracts to share such data, in response to a reasonable request.
5) Failing to notify a consumer when the company discloses their personal data to a state actor unless the company is legally required not to disclose.
6) Misstating or mischaracterizing the subject matter, methods, frequency, or results of any of one's own internal or external assessments.

Security

1) Failing to secure personal data, to protect the integrity of personal data, or to prevent unauthorized access or processing of personal data.

2) Failing to promptly notify affected parties following a data breach.

3) Failing to comply with state data breach laws and regulations when such failure affects interstate commerce and is not inconsistent with federal law.

4) Disclosing non-public personal data to a service provider or third party without contractually requiring the service provider or third party to meet the same privacy standards as the company, or without engaging in reasonable oversight to ensure compliance with such requirements.

Accountability

1) Retaliating against whistleblowers who attempt to report unfair or deceptive practices.

2) Knowingly aiding and abetting another person engaging in an unfair or deceptive practice.

3) Failing to report to the Commission if a company has knowledge that a service provider, affiliate, or customer has engaged in an unfair or deceptive practice involving the company's goods or services. This does not include content immunized by 47 U.S.C. 230.

4) Failing to provide an annual sworn certification from a C-suite officer or equivalent senior officer that a company (other than a small business) is fully compliant with the FTC's data privacy rules.

Office of Civil Rights

The FTC should create an Office of Civil Rights. There are more than 30 civil rights offices within federal agencies. The harms and unfair or deceptive practices discussed in this letter are part of a large, interconnected data ecosystem. Expanding the Commission's expertise on discrimination and equal opportunity will help it holistically assess the equities of modern digital trade. Such an Office will create a focal point for Agency expertise and stakeholder engagement on these important issues. The Office could also advise on actions the Commission may take, and coordinate with other agencies, to help respond to commercial data practices that may result in unjust disparate treatment or impact on the basis of race, ethnicity, religion, national origin, immigration status, disability, sex, gender identity or expression, sexual orientation, age, or familial status.

As the FTC looks to chart a new course for oversight of unfair and deceptive practices arising from commercial data practices and big tech, we look forward to working with you to protect civil rights, promote algorithmic fairness, advance equal opportunity, and preserve privacy and free expression.

For more information, please contact David Brody and Sara Collins.

Sincerely,

Access Now

Accountable Tech

Asian Americans Advancing Justice | AAJC

American Association for Justice

ADL

Center for American Progress

Center for Digital Democracy

Center for Democracy and Technology

Center of Privacy & Technology at Georgetown Law

Common Sense Media

Consumer Action

Consumer Federation of America

Electronic Privacy Information Center

HTTP

Lawyers' Committee for Civil Rights Under the Law

Media Alliance

National Council of Asian Pacific Americans

National Fair Housing Alliance

National LGBT Task Force

OCA – Asian Pacific American Advocates

Public Citizen

Public Knowledge

Ranking Digital Rights

The Greenlining Institute

From: Kopec, Janice
Sent: Wed, 12 May 2021 03:17:11 +0000
To: Holland, Caroline; Mark, Synda; Slaughter, Rebecca
Subject: (b)(5)
Attachments:

(b)(5)

From: Josh Golin
Sent: Thu, 25 Jul 2019 15:04:24 -0400
To: Simons, Joseph; Phillips, Noah; Wilson, Christine; Slaughter, Rebecca; Chopra, Rohit
Cc: Crawford, Molly; Magee, Peder; Laura Moy; Angela Campbell; Lindsey Barrett; David Monahan; Jeffrey Chester
Subject: Important new research on YouTube's popularity with children
Attachments: Pew YouTube Report 2019.pdf

Dear Chairman Simons, Commissioner Phillips, Commissioner Chopra, Commissioner Slaughter, and Commissioner Wilson,

In case you missed it, Pew released an important new study today that examined the most popular channels on YouTube. As far as I know, it's the first study that uses human coders to determine if YouTube videos are "child-directed." The study examined one-week of videos from the 43,770 channels with at least 250,000 subscribers: Among the key findings:

> **Videos aimed at children were highly popular, as were those that featured children under the age of 13 – regardless of their intended audience.** Only a small share of English-language videos posted by these popular channels during the study period were explicitly intended for children (based on a consensus of human coders). But those that tended to be longer received more views, and came from channels with a larger number of subscribers relative to general-audience videos. More broadly, videos featuring a child or children who appeared to be under the age of 13 – regardless of whether the video in question was aimed exclusively at children or not – received nearly three times as many views on average as other types of videos. And the very small subset of videos that were directly aimed at a young audience and *also* featured a child under the age of 13 were more popular than any other type of content identified in this analysis as measured by view counts.

And:

> **Children's videos tended to be longer and received more views than many other types of content; a large share of these videos focused on toys or games**
>
> In total, just 4% of all English-language videos posted by popular YouTube channels in the first week of 2019 appeared to be aimed at children under the age of 13. But despite comprising a relatively small share of the total, children's videos tended to be longer, received more views, and came from channels with a greater number of subscribers relative to content aimed at a general (teen or adult) audience. Videos that appeared to be intended for children averaged 153,227 views (median of 17,540), compared with an average of 99,713 views (14,187 median) for other videos. Channels that posted children's videos also had many more subscribers: 1.9 million on average (872,188 median) vs. 1.2 million (586,588 median) among channels that did not post a video aimed at children during the week. And half of all children's videos lasted at least 11 minutes, compared with a median of 7 for other videos.
>
> As noted above, children's content could belong to any of the other topical categories in this analysis, and children's content related to toys or games (excluding video games) was both highly common and tended to receive many views. Some 28% of children's videos were related to toys or games, and these videos received an average of 147,923 views (30,929 median), compared with 109,585 views (22,871 median) for toys or games videos aimed at a general audience.
>
> Channels that produced videos about toys or games – especially those that appeared to target children – also had more subscribers than average. Channels that produced at least one video

during this week about toys or games that was aimed at children had, on average, 2.1 million subscribers (median of 1.1 million), compared with 1.2 million (586,126 median) for channels that did not produce any videos meeting this description.

We believe these findings are significant because they demonstrate, with rigorous methodology, that portions of YouTube are clearly child-directed and have large child audiences. We also note how much of the popular children's content is designed to promote toys and other products, an issue we've raised at the Commission on a number of occasions.

I've attached the study and here is the LA Times reporting on the research.

We continue to hope that the Commission's final settlement with Google will include significant measures to ensure that YouTube is COPPA compliant going forward as we outlined in our letter of June 25th and subsequent phone conversations. Please don't hesitate to contact me if you have questions.

Thank you for your time and attention to this critical matter,

Josh

Josh Golin
Executive Director
CCFC: Campaign for a Commercial-Free Childhood
(b)(6)
http://www.commercialfreechildhood.org
Stand up for children: Support CCFC

Pew Research Center

FOR RELEASE JUL. 25, 2019

A Week in the Life of Popular YouTube Channels

An analysis of every video posted by high-subscriber channels in the first week of 2019 finds that children's content – as well as content featuring children – received more views than other videos

BY *Patrick Van Kessel, Skye Toor and Aaron Smith*

FOR MEDIA OR OTHER INQUIRIES:

Patrick van Kessel, Senior Data Scientist
Shawnee Cohn, Communications Manager

202.419.4372

www.pewresearch.org

RECOMMENDED CITATION

Pew Research Center, July 2019, "A Week in the Life of Popular YouTube Channels"

About Pew Research Center

Pew Research Center is a nonpartisan fact tank that informs the public about the issues, attitudes and trends shaping America and the world. It does not take policy positions. The Center conducts public opinion polling, demographic research, content analysis and other data-driven social science research. It studies U.S. politics and policy; journalism and media; internet, science and technology; religion and public life; Hispanic trends; global attitudes and trends; and U.S. social and demographic trends. All of the Center's reports are available at www.pewresearch.org. Pew Research Center is a subsidiary of The Pew Charitable Trusts, its primary funder.

A Week in the Life of Popular YouTube Channels

An analysis of every video posted by high-subscriber channels in the first week of 2019 finds that children's content – as well as content featuring children – received more views than other videos

The media landscape was upended more than a decade ago when the video-sharing site YouTube was launched. The volume and variety of content posted on the site is staggering. The site's popularity makes it a launchpad for performers, businesses and commentators on every conceivable subject. And like many platforms in the modern digital ecosystem, YouTube has in recent years become a flashpoint in ongoing debates over issues such as online harassment, misinformation and the impact of technology on children.

Amid this growing focus, and in an effort to continue demystifying the content of this popular source of information, Pew Research Center used its own custom mapping technique to assemble a list of popular YouTube channels (those with at least 250,000 subscribers) that existed as of late 2018, then conducted a large-scale analysis of the videos those channels produced in the first week of 2019. The Center identified a total of 43,770 of these high-subscriber channels using a process similar to the one used in our study of the YouTube recommendation algorithm. This data collection produced a variety of insights into the nature of content on the platform:

A week in the life of popular YouTube channels

Source: Analysis of videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API.
"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

The YouTube ecosystem produces a vast quantity of content. These popular channels alone posted nearly a quarter-million videos in the first seven days of 2019, totaling 48,486 hours of content. To put this figure in context, a single person watching videos for eight hours a day (with no breaks or days off) would need more than 16 years to watch all the content posted by just the most popular channels on the platform during a single week. The average video posted by these channels during this time period was roughly 12 minutes long and received 58,358 views during its first week on the site.

Altogether, these videos were viewed over 14.2 billion times in their first seven days on the platform.[1]

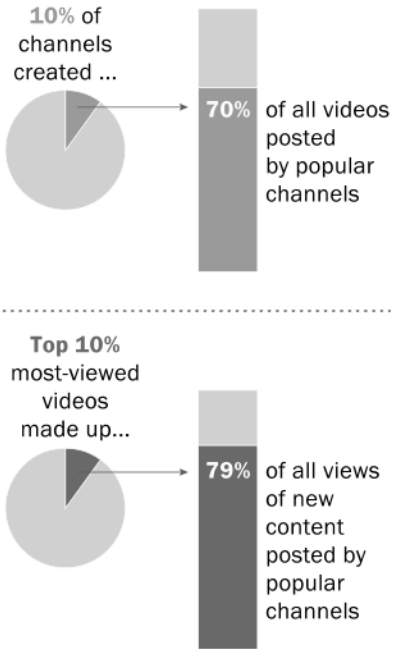
YouTube is a global phenomenon, and its most popular channels posted a substantial amount of content in languages other than English. Using a combination of hand-labeling and machine learning, the Center categorized videos based on whether or not they contained any text or audio in a language other than English. The results of this analysis illustrate the global nature of the YouTube platform. Just over half of these channels (56%) posted a video during the first week of 2019, and the majority of these active channels (72%) posted at least one video that was partially or completely in a language other than English. Overall, just 17% of the nearly quarter-million videos included in this analysis were fully in English.

A small share of highly active creators produced a majority of the content posted by these popular channels. As is the case with many online platforms (such as Twitter) a relatively small share of channels were responsible for a majority of the content posted during the study period. Just 10% of the popular channels identified in the Center's mapping produced 70% of all the videos posted by these channels during the first week of 2019. Similarly, the 10% of popular-channel videos that had the most views in this period were responsible for 79% of all the views that went to new content posted by these channels.

The total number of high-subscriber channels increased dramatically in the second half of 2018. The Center's mapping process identified 9,689 channels that crossed the 250,000-subscriber threshold between July 2018, when the Center last conducted an analysis of YouTube data, and December 2018, when the data was updated for this analysis. That represents a 32% increase in the total number of popular channels over that period. By the same token, the number of

Large majority of videos from popular YouTube channels came from a small share of producers

Of YouTube videos produced by popular channels during the first week of 2019 ...



Source: Analysis of videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API.
"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

[1]YouTube uses a proprietary algorithm to determine how many times a video has been watched by actual humans, as opposed to computer programs. While it has not released an official threshold, a number of third parties report that "views" do not appear to be counted unless a user watches at least 30 seconds of a video.

subscribers to existing popular channels that had already been identified as of July 2018 increased by an average of 27% over the same period.

In addition to this broader data collection, Pew Research Center also conducted a separate content analysis of the English-language videos posted by these popular channels over the first week of 2019 (in total, 37,079 videos met this description). The Center used human coders to identify the primary category or theme of each video (such as video games, consumer technology or current events and politics), and also examined the keywords used in video titles and descriptions to identify words that were widely used and associated with higher view counts relative to other videos. Some of the key findings from this analysis include:

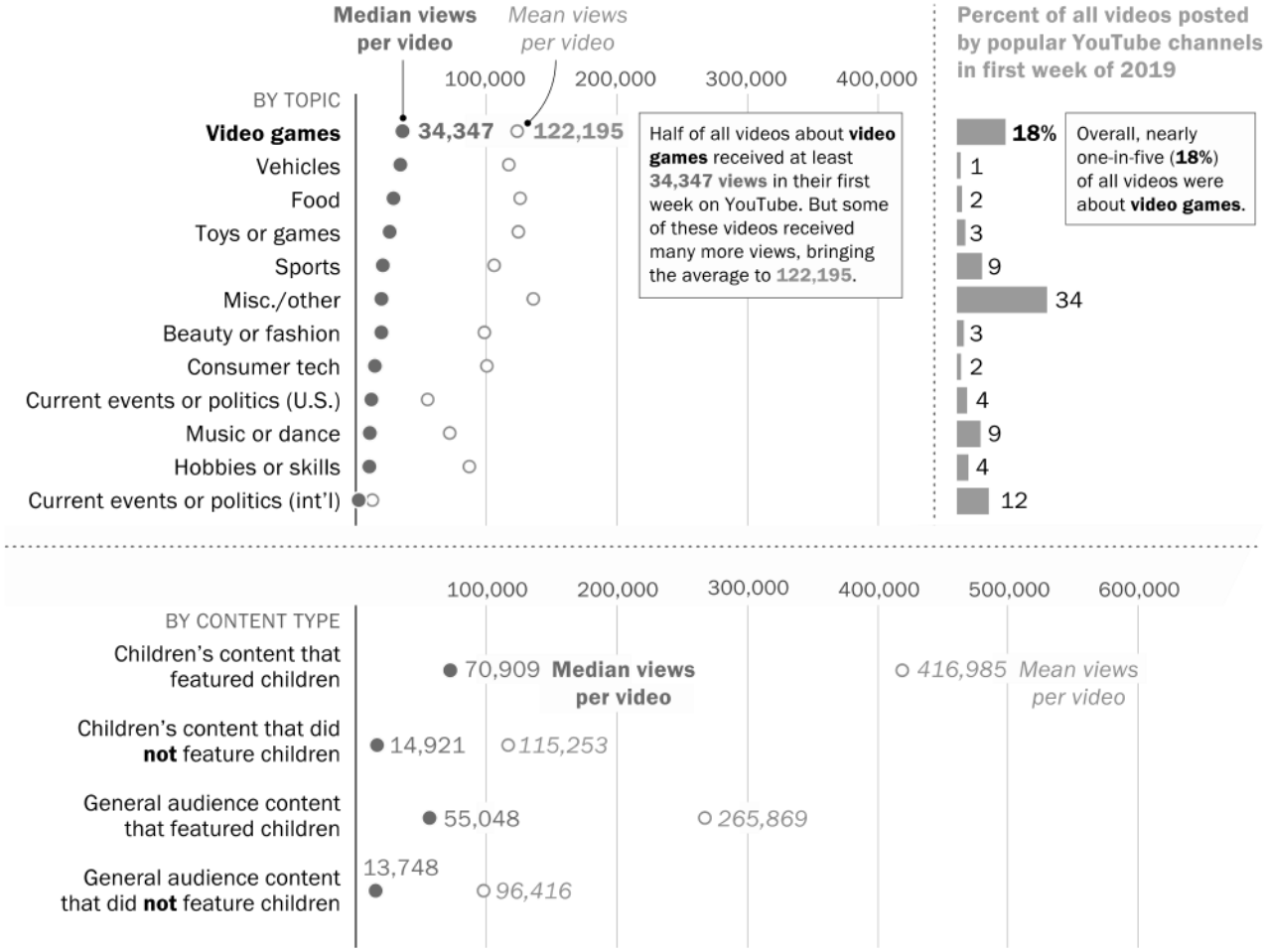
Videos aimed at children were highly popular, as were those that featured children under the age of 13 – regardless of their intended audience. Only a small share of English-language videos posted by these popular channels during the study period were explicitly intended for children (based on a consensus of human coders). But those that were tended to be longer, received more views, and came from channels with a larger number of subscribers relative to general-audience videos. More broadly, videos featuring a child or children who appeared to be under the age of 13 – regardless of whether the video in question was aimed exclusively at children or not – received nearly three times as many views on average as other types of videos. And the very small subset of videos that were directly aimed at a young audience and *also* featured a child under the age of 13 were more popular than any other type of content identified in this analysis as measured by view counts.

It should be noted that YouTube explicitly states that the platform is not intended for children under the age of 13. YouTube provides a YouTube Kids platform with enhanced parental controls and curated video playlists, but the analysis in this report focuses on YouTube as a whole.

English-language videos related to current events or politics posted by these popular channels tended to have an international (rather than U.S.) focus. Videos explicitly related to current events or politics were relatively common, comprising 16% of all English-language videos uploaded during the study period. However, the majority of these videos were international in focus and did not mention events, issues or opinions related to the United States. While channels that posted one or more U.S. current events or politics videos were particularly active – posting an average of 63 total videos during the week – U.S. current events or politics videos comprised just 4% of all of the videos that were posted by popular channels overall.

Videos for children – as well as those featuring children – received a large number of views during the study period relative to other topical categories

Median/mean views among English-language videos about ____ posted by popular YouTube channels during the first week of 2019



Note: Topics developed by Pew Research Center researchers and assigned to individual videos by human coders.
Source: Analysis of English-language videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API. View totals calculated based on each video's first seven days on the site.
"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

Content involving video games was a fixture of popular channels on YouTube. Meanwhile, some 18% of English-language videos posted by popular channels during the study period related to video games or gaming. Content about video games was one of the most popular genres of content as measured by total views during the seven days of the study period, and these videos also tended to be much longer than other types of videos.

Certain video title keywords were associated with increased view counts. An analysis of the titles of English-language videos finds that certain keywords were associated with much higher view counts relative to other videos over the course of the study period. Some of these point to the platform's orientation toward entertainment. For instance, videos mentioning words like "Fortnite," "prank" or "worst" received more than five times as many views at the median as videos not mentioning those words. Others were more substantive in nature. For example, the use of the word "Trump" in video titles was associated with a significant increase in median views among videos about American current events or politics. Indeed, some 36% of videos about American current events or politics posted by these popular channels during the study period mentioned the words "president" or "Trump" in their titles.

Cross-promotion of videos with other social media channels was both widespread and associated with an increase in views. Seven-in-ten of these videos mentioned other prominent social media platforms such as Instagram or Twitter in their description (either in links or in the text itself), and those that did received more views than videos that did not link to other platforms.

The above findings are based on an analysis of YouTube channels with at least 250,000 subscribers and the videos they posted over the week of Jan. 1-7, 2019, building on the Center's previous study of the YouTube recommendation algorithm. Using several recursive and randomized methods, we traversed millions of video recommendations made available through the YouTube API and identified as many unique channels as possible. As of January 2019, 1,525,690 total channels had been found, 43,770 of which had at least 250,000 subscribers. For the purposes of this study, these are defined as "popular channels." Using this list of popular channels, researchers collected every video published on these channels during the first week of 2019 and tracked each of them for the seven days following their publication.

A note on interpreting the findings in this study

In the same way that survey research involves a certain degree of uncertainty and error, "big data" projects are also subject to potential error as well. While Pew Research Center made every attempt to conduct this analysis with rigor and accuracy, there are several different ways a modest amount of error may have been introduced. The findings presented here should be considered with this potential for error in mind.

- **Definition of popular channels.** The Center chose a minimum threshold of 250,000 subscribers for the channels included in this analysis. This cutoff ensured that the analysis was focused on the most popular channels on the site while also limiting the analysis to a

manageable number of channels that could be monitored and tracked in a timely manner. However, it is possible that the use of a lower (or higher) threshold and the inclusion of more (or fewer) channels would have yielded different results.

- **Missing popular channels.** Because there is no official, comprehensive list of YouTube channels (popular or otherwise), the Center used its own mapping technique to search for and identify channels. This process involved repeatedly following video recommendations from one channel to another for nearly a year until we could no longer identify any additional channels with more than 250,000 subscribers. It is possible that this process failed to identify all the popular channels on YouTube, but evidence suggests that the number of missing channels is likely to be negligible. During the final six months of channel mapping between July and December 2018, the list of popular channels that we had identified expanded by 44% – from 30,481 channels to 43,770. However, the bulk of these additions comprised known channels that had added new subscribers during that period. Just 12% of the new channels had not been previously identified by our mapping process.

- **Problems with the YouTube API.** During the data collection process, requests to the YouTube Application Programming Interface (API) occasionally failed for a variety of reasons. As a result, we were unable to capture 4% of the video time stamps we had intended to collect. Such hiccups are not uncommon when working with APIs, and can be due to bugs, issues with internet connectivity, changes to privacy settings made by channel owners, or simply because some videos were removed during the week. Because these errors were sporadic and appeared to occur at random, the Center was able to use estimation methods to fill in most of the missing values. While this introduced a small amount of approximation error, its impact on the findings presented here should be negligible.

- **Language misclassification.** Because it was unrealistic for humans to directly examine the nearly quarter-million videos posted by these channels, the Center trained a custom machine learning model to automate the process of classifying whether or not a video was in English. When compared with a sample of videos that had been coded by Center researchers, the classification model achieved 97% to 98% accuracy during various tests. However, 4% to 9% of the videos that it labeled as "English" contained content in other languages, and the model also misclassified 7% to 8% of the videos that human coders had identified as being in English. Videos that were incorrectly labeled as English by the model were later removed by human coders during content analysis, but it is likely that a small set of English videos were excluded from the analysis due to classification error.

- **Coder misclassification.** Pew Research Center used human coders to classify the content of the English-language videos examined in this study. Center researchers labeled a small sample of videos themselves, while the remaining thousands were each coded by three separate coders on Amazon's Mechanical Turk crowdsourcing platform. For each video, we then reconciled the results from the three coders using thresholds that maximized how much the crowdsourced results agreed with the Center's researchers. While agreement was generally high, a modest number of disagreements and misclassifications are still likely to have occurred because the concepts studied here – such what qualifies as "children's content" – inherently involve a certain degree of subjectivity.

- **YouTube is constantly changing.** The videos analyzed in this report represent those posted by channels with a certain number of subscribers over a particular period of time. Since then, many channels may have gained or lost subscribers, the publishing habits of popular channels may have changed, and the viewing habits of their subscribers may have as well. YouTube has also since made changes to its policies about the kinds of content that are acceptable to publish. Because of these and many other constantly shifting factors, the findings presented here may or may not represent the activity of popular channels at other times in the past, present or future.

1. Popular YouTube channels produced a vast amount of content, much of it in languages other than English

YouTube is vast and constantly changing. In order to craft a manageable and meaningful research project, Pew Research Center limited the scope of data collection to only the most popular channels on the site. These popular channels alone produced a total of 243,254 videos during the first week of 2019, totaling 48,486 hours of content. The average video was 12 minutes long, although the length of videos posted during this period varied widely: Some 3% of the videos lasted longer than 60 minutes.

These findings also hint at the scale of how many hours people around the globe watch videos on the platform. Collectively, the videos produced by these popular channels were viewed over 14.2 billion times worldwide after one week on the site. Of course, these views were spread across a vast number of videos – each individual video received an average of 58,358 views in its first week, although 50% received fewer than 3,860 views. Conversely, a small fraction of these videos received substantial engagement: The 10% most-viewed videos were responsible for 79% of all the views that went to new content posted by popular channels during the week.

Videos generally received the most engagement during their first day on the platform, with engagement tapering off over the course of the week following their publication. Collectively, two-thirds (64%) of the total views that these videos received in their first week on the platform came on the day they were posted – as did 79% of their likes, 73% of their dislikes and 80% of their comments.

A majority of channels that posted a video in the first week of 2019 did so in a language other than English, and a small number of channels produced the majority of videos

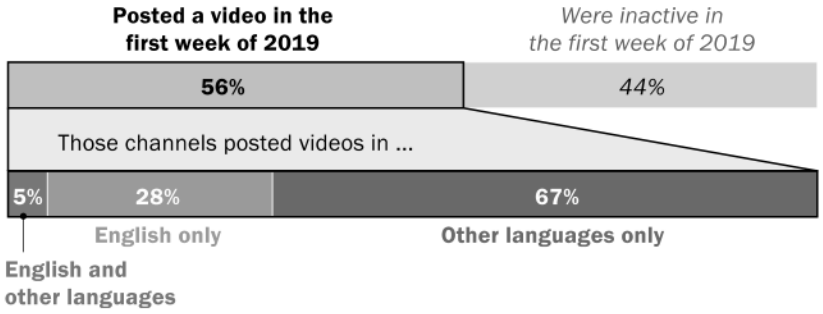
Just over half of the popular channels on YouTube posted at least one video on the platform during the first week of 2019, and a majority of them posted content that contained segments in a language other than English.[2] Of the 43,770 popular channels that the Center identified

[2] Videos were classified using a supervised machine learning model trained on a dataset of 3,900 human-labeled videos. Videos containing any prominent content in another language (spoken or written) were marked as such, unless the video contained complete English subtitles. Videos that contained no spoken language were considered to qualify as English. The classifier achieved a high degree of accuracy (98%), precision (96%) and recall (92%), but a minority of videos may have been misclassified. All videos flagged as English were examined and false positives were corrected. However, the set of videos that have been labeled as containing content in another language – which was too large to examine and correct – may contain a small number of English videos. Findings presented here should accordingly be treated as estimates.

as of December 2018, 56% posted a video in the first week of the new year. And within this subset of active channels, 28% posted videos exclusively in English. Meanwhile, 67% posted videos exclusively in languages other than English, and 5% posted videos in multiple languages including English.

More than half of popular YouTube channels posted a video in first week of 2019, but majority produced content in languages other than English

% of YouTube channels with at least 250,000 subscribers that ...



Source: Analysis of videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API. Videos were classified by language using a supervised machine learning model trained on a dataset of human-labeled videos.
"A Week in the Life of Popular YouTube Channels"

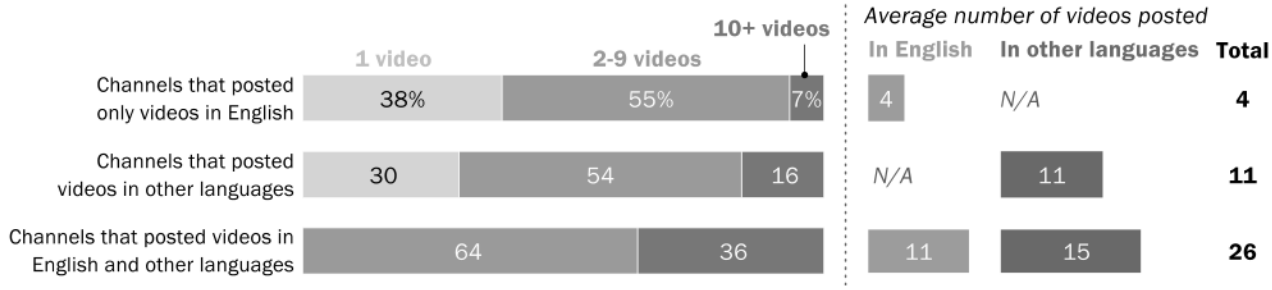
PEW RESEARCH CENTER

"Active" channels (those that posted at least one video in the first week of 2019) ranged widely in the quantity of content they produced during the first week of 2019. Three-in-ten (31%) of these active popular channels posted exactly one video, while 55% posted more than one video but fewer than 10. Just 14% posted 10 or more videos during the study period, but this subset of channels was responsible for publishing 75% of all of the videos uploaded by popular channels during the week.

Channels that posted in both English and another language were especially likely to be part of this highly active group. Just 7% of English-only channels posted 10 or more videos, but that share increased to 16% among channels that posted exclusively in other languages, and to 36% among channels that posted videos in both English and other languages.

Popular channels that posted in English and other languages created more content during the study period

Among popular YouTube channels that posted at least one video during the first week of 2019, the % that posted ...



Source: Analysis of videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API. Videos were classified by language using a supervised machine learning model trained on a dataset of human-labeled videos.
"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

To some extent, high levels of activity among channels that posted in both English and other languages are to be expected, because these channels by definition had to post at least two videos (one in English and one in another language) in order to belong to this group. At the same time, channels that posted in English and other languages posted more non-English videos than did channels that posted exclusively in other languages (15 videos in other languages vs. 11, on average), and also posted more English-language videos (an average of 11) than did channels that posted exclusively in English (average of 4).

Across all three groups (channels that posted exclusively in English, those that posted exclusively in languages other than English, and those that posted a mix of English and other languages) the 10 individual channels that posted the largest number of videos during the week were dominated by those offering news and sports content. For lists of the 10 most-active channels in each of these groups, see Appendix A.

Fewer than one-in-five videos from popular YouTube channels were in English, but these videos received more views than videos in other languages

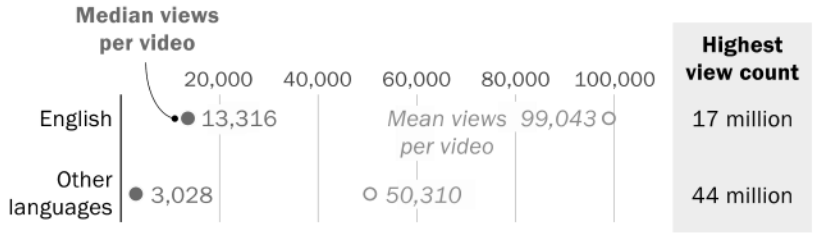
Thanks to these high levels of posting activity by non-English and multilingual channels, the majority of the individual videos posted by all popular channels were in a language other than English. This analysis finds that more than four out of every five videos uploaded to the site during the week contained content in a language other than English, while 17% of all the videos posted by popular channels during the week were in English. But despite being less common than videos in other languages, English-language videos tended to be more popular, generating a median of

13,316 views (99,043 on average) in their first week, compared with a median of just 3,028 (50,310 on average) for videos in other languages.

Put differently, English-language videos comprised just 17% of the videos that were published by popular channels during the week, but they received 28% of all of the views received by popular-channel videos during their first week after being published. English-language videos also received more likes (298 median vs. 42), dislikes (16 median vs. 5) and comments (47 median vs. 6) and were longer than videos with content in other languages (a median of 7 minutes vs. 4).

English-language videos received more views during the week relative to content in other languages

Total views in the first seven days for ____ videos posted by popular channels on YouTube during the first week of 2019



Source: Analysis of videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API. Videos were classified by language using a supervised machine learning model trained on a dataset of human-labeled videos.
"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

Do popular channels produce the most popular videos?

To place the videos posted by popular channels in the context of all of the content posted to YouTube overall, the Center used the YouTube API to compile a separate list of the most-viewed videos that were published during the week, then compared this list of videos with those posted by popular channels during the same period. For reasons that are unclear, the results that were returned by the API do not appear to be complete, but they nonetheless provide an interesting point of comparison and suggest that popular channels are responsible for many of the most-viewed videos on YouTube.[1]

Of the top 500 videos collected from the API, 76% were present in our list of videos produced by popular channels. Of these, the majority (60%) were in English, while 16% contained content in another language.[2]

Just 21% of the videos in the top-500 list were published by channels that had fewer than 250,000 subscribers. According to the API, the most popular such video was a foreign language short film that had received over 33 million views as of Jan. 22, 2019. However, this channel soon crossed the 250,000-subscriber threshold and by June 2019 had reached nearly 1.5 million subscribers.

[1] This list was collected on Jan. 22, 2019, based on view counts as of that date, and was restricted to videos that were available to view in the United States (the default filter for the API). According to the results returned, the most viewed video published during the first week of 2019 had received 111 million views by Jan. 22, but the video that the API reported to be the 500th most-viewed video of the week had received just under 67,000 views (66,752). In comparing our list of videos published by popular channels against the API's list of the top 500 videos overall, we found 36,272 videos that were published by popular channels during the week that received more views than the video the API ranked as 500th. The YouTube API documentation does not provide enough information to explain this discrepancy, but these findings suggest that this list is incomplete and represents only a sample of popular videos that were published in the first week of 2019.

[2] An additional 15 videos were uploaded from channels that passed the 250,000-subscriber threshold after we had completed scanning for popular channels in December 2018, and one video was published by a channel that had been popular at the time but was not correctly identified by the scanning process that the Center used to identify popular channels.

2. Children's content, content featuring children and video games were among the most-viewed videos genres

Along with examining the number of videos posted and languages used by these popular channels, this analysis also sought to gain a deeper understanding of the actual content of the videos these channels produce. However, there are limits to how much information can be gleaned from the categories and descriptions attached to YouTube videos themselves. The YouTube Data API provides topic tags for videos and channels, but these topics are often too general ("TV shows") or too specific ("Music of Latin America") to be useful for a broad analysis of video content. These topic tags have also not been validated for accuracy, and in some cases were not available: 8% of the videos and 3% of the channels included in this analysis did not have any topic tags assigned to them.

To address these limitations and more fully categorize the English-language content produced by popular YouTube channels, Pew Research Center commissioned human coders on Amazon's Mechanical Turk crowdsourcing platform to watch these videos and categorize them into topical areas. After accounting for videos that had been removed or deleted at the time the coding took place, as well as videos that had been misclassified as being in English by our automatic language detection software, a total of 37,079 videos were included in this analysis.[3]

The human coders were instructed to classify videos into 11 broad categories. These categories, along with examples of the specific types of content that might be included in each, are highlighted in the table below:

[3] Videos were initially determined to either be in English or in another language using a supervised machine learning model that may have resulted in a modest amount of error. See Methodology for details.

How we categorized YouTube videos by topic

CATEGORY	EXAMPLES OF VIDEOS MEETING THIS DEFINITION
Video games	Fortnite, PUBG, Xbox, PlayStation, Nintendo, Minecraft, sports/vehicle video games, e-sports, footage of mobile games for kids, video game animations
Current events or politics	Government, political debates, world events, social issues, business/science news, local news, political conspiracies (Note: does NOT include celebrity news)
Sports, fitness, or physical activities	Football, basketball, soccer, martial arts, golf, WWE, yoga, bodybuilding, biking, surfing, skateboarding, archery, shooting, athlete interviews
Music or dance	Music videos, nursery rhymes, sing-alongs, soundtracks, instrument tutorials, performances/concerts/competitions, musician interviews
Creativity, skills, or learning	Arts, crafts, design, life hacks, DIY, home experiments, language/math/science lessons, photography, home improvement, gardening, programming lessons, software tutorials
Toys or games	Physical toys, Lego, Nerf, Play-Doh, slime, figurines, kids playing with toys, stop-motion animation with toys (Note: does NOT include video games)
Beauty or fashion	Makeup, cosmetics, clothes, shoes, jewelry, hairstyling, nails
Food or nutrition	Recipes, cooking, healthy eating, diet, weight loss, bartending, restaurants, meals
Consumer tech	Tech products like phones, computers, miscellaneous apps and gadgets that don't clearly pertain to a specific category above
Vehicles	Cars, racing and motorsports, motorcycles, aircraft, trains, boats and sailing, RC vehicles (Note: does NOT include vehicle-related video games)
Miscellaneous or other	Any content not included in categories above. Includes – but is not limited to – general entertainment, vlogs, celebrity news, skits, movies, talk shows, pop culture, human interest pieces, cartoons, comics, religion, astrology, paranormal, animals, pets, ASMR, etc.

"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

Along with coding videos into these general topical categories, the Center also coded videos along three other metrics:

- Videos with content about politics or current events were further subdivided based on whether the video mentioned issues pertaining to the United States.
- Coders were instructed to identify content (regardless of topic) that appeared to be intended for an audience of children under the age of 13. In identifying videos with children as their primary audience, the coders were asked to identify videos that they believed were *clearly and*

exclusively aimed at children. Videos that might appeal to children as well as teenagers or adults were intentionally excluded from this category.

- Coders were also asked to identify content in which a child who appeared to be under the age of 13 participated in the video, regardless of whether the video was directly intended for children or young people.

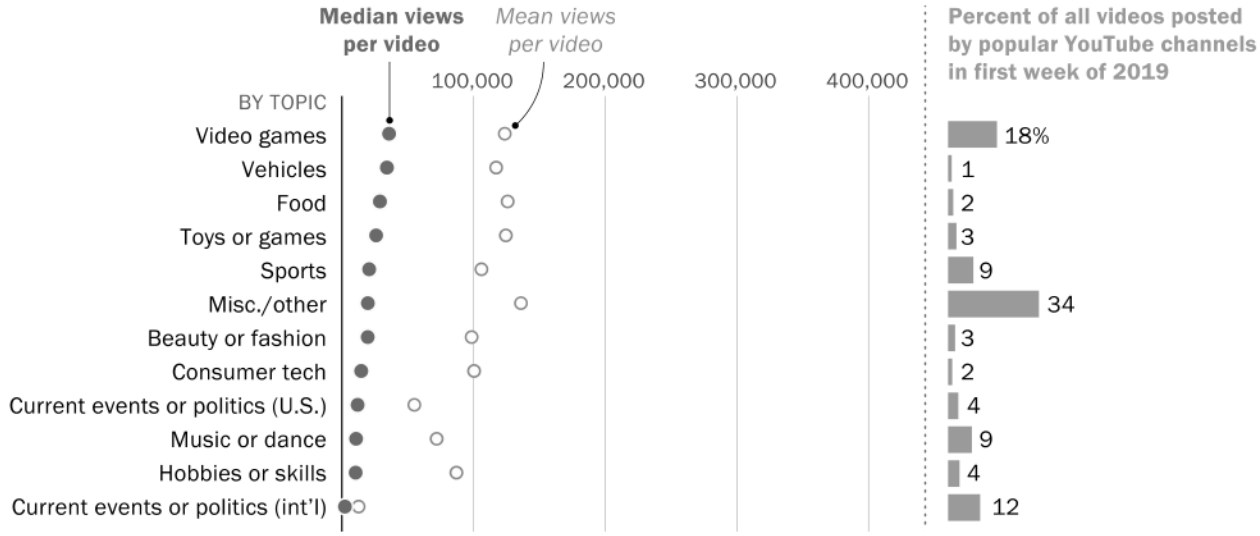
Each video was coded by three different individuals to ensure there was adequate agreement on the content of the video. The coders' responses were then reconciled using various thresholds designed to maximize agreement with Center researchers.[4]

Overall, one-third of the videos uploaded by popular channels during the week consisted of miscellaneous videos pertaining to general entertainment and other topics, such as vlogs (video blogs), celebrity news, movies, pop culture, pranks and pet videos. Of the more specific content categories, video games (accounting for 18% of the coded videos) were the most common. Videos related to international current events or politics (12% of coded videos), as well as those relating to sports or fitness (9%) and music/dance (9%), were also among the more common topics posted during the week. In terms of overall views, videos about video games, vehicles (1% of coded videos), food (2%), and toys or games (3%) were among the most-viewed categories on average. For a list of the most-viewed individual videos in each category during the week, see Appendix B.

[4] For example, Mechanical Turk coder results most closely agreed with Center experts when all three coders indicated that a video was intended for children, while agreement was highest when any one of the three Mechanical Turk coders indicated that a video contained content in a language other than English (which was often present in just a portion of a video and therefore easy to miss).

Videos about video games among the most common, most-viewed of those posted by popular channels in first week of 2019

Total views in the first seven days on the site for English-language videos about ____ posted by popular channels on YouTube during the first week of 2019



Note: Topics developed by Pew Research Center researchers and assigned to individual videos by human coders.
Source: Analysis of English-language videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API.
"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

Children's videos tended to be longer and received more views than many other types of content; large share of these videos focused on toys or games

In total, just 4% of all English-language videos posted by popular YouTube channels in the first week of 2019 appeared to be aimed at children under the age of 13. But despite comprising a relatively small share of the total, children's videos tended to be longer, received more views, and came from channels with a greater number of subscribers relative to content aimed at a general (teen or adult) audience. Videos that appeared to be intended for children averaged 153,227 views (median of 17,540), compared with an average of 99,713 views (14,187 median) for other videos. Channels that posted children's videos also had many more subscribers: 1.9 million on average (872,188 median) vs. 1.2 million (586,588 median) among channels that did not post a video aimed at children during the week. And half of all children's videos lasted at least 11 minutes, compared with a median of 7 for other videos.

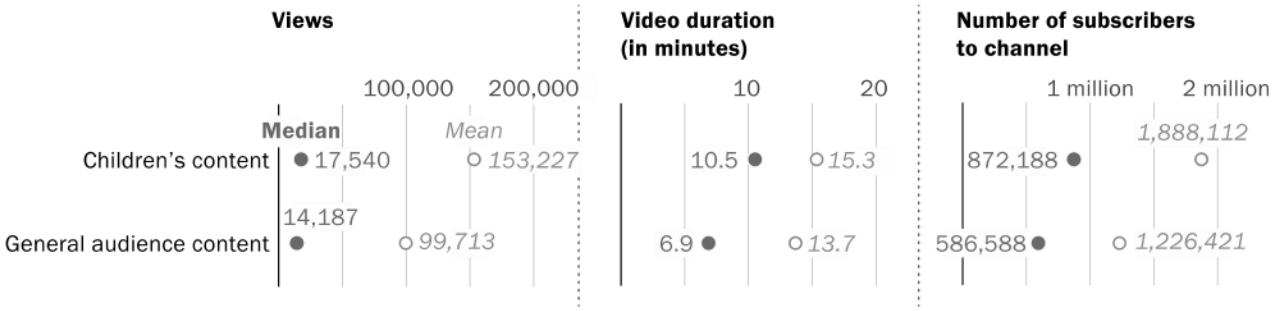
As noted above, children's content could belong to any of the other topical categories in this analysis, and children's content related to toys or games (excluding video games) was both highly

common and tended to receive many views. Some 28% of children's videos were related to toys or games, and these videos received an average of 147,923 views (30,929 median), compared with 109,585 views (22,871 median) for toys or games videos aimed at a general audience.

Channels that produced videos about toys or games – especially those that appeared to target children – also had more subscribers than average. Channels that produced at least one video during this week about toys or games that was aimed at children had, on average, 2.1 million subscribers (median of 1.1 million), compared with 1.2 million (586,126 median) for channels that did not produce any videos meeting this description.

Content aimed at children tended to be longer, received more views, and came from channels with more subscribers relative to general-audience videos

Median/mean number of ____ for children's or general-audience videos posted to popular YouTube channels in first week of 2019



Note: Videos identified as intended for children by human coders.
Source: Analysis of English-language videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API.
"A Week in the Life of Popular YouTube Channels"

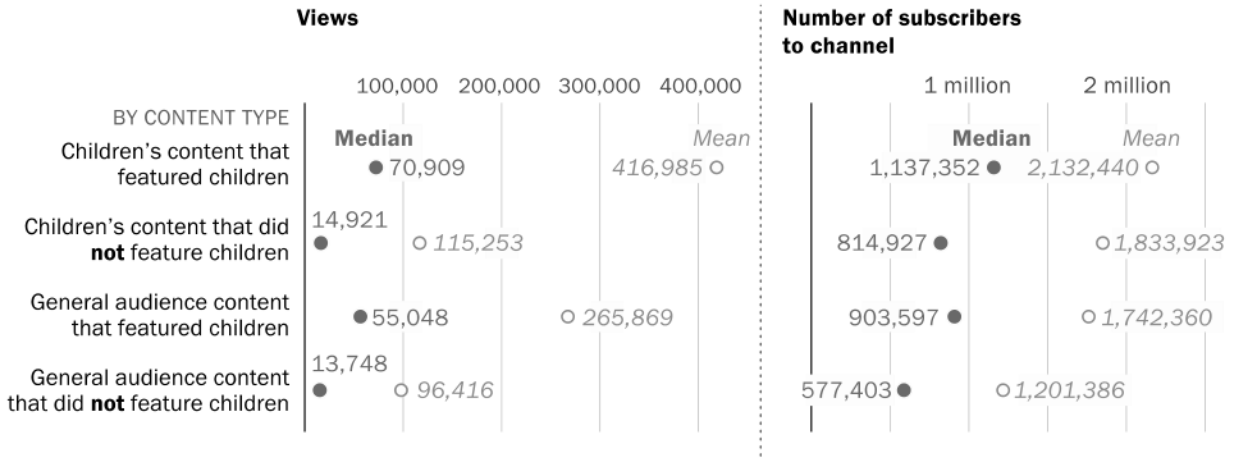
PEW RESEARCH CENTER

Videos featuring a child or children under the age of 13 were substantially more popular than other types of content during the study period

Beyond this specific subset of videos targeted to a young audience, the broader set of videos that included a child or children similarly stood out from other types of content. In total, the Center's analysis estimates that just 2% of videos posted by popular channels during the first week of 2019 featured a child or children that appeared to be under the age of 13. However, this small subset of videos averaged three times as many views as did other types of videos: Videos that featured a young child received an average of 297,574 views (median 56,527) compared with an average of 97,081 views (median 13,794) for those that did not. Furthermore, channels that produced at least one video that featured a child averaged 1.8 million subscribers, compared with 1.2 million for those that did not (913,769 vs. 592,057 median).

Videos featuring children under the age of 13 were associated with more views and more channel subscribers, regardless of target audience

Median/mean number of ____ for English-language videos in each category posted to popular YouTube channels in first week of 2019



Note: Videos identified as being intended for children and/or including a child under the age of 13 by human coders.
Source: Analysis of English-language videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API.
"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

Notably, a large majority of the videos that featured children were not intended exclusively for a young audience. This analysis estimates that just 21% of videos featuring children were directed toward young children to the exclusion of other audiences. Similarly, only a minority of children's videos (13% of those posted) contained footage of a child that appeared to be under the age of 13. But the small share of videos at the intersection of these two categories – that is, videos that were both aimed at children and featured a child under the age of 13 – were one of the single-most popular video categories captured in this analysis, averaging four times as many views (416,985 vs. 96,416) as general-audience videos that did not feature a child (70,909 vs. 13,748 median).

The majority of videos that included a child (79%) were oriented toward a general audience rather than children specifically. And while these videos were somewhat less popular than videos featuring a child that were aimed specifically to young viewers, they also received substantially more views than either children's or general-audience content that did not feature children.

The five most-viewed individual videos intended for children that did not contain a child consisted largely of animated content, songs or nursery rhymes. As was true in the Center's study of videos recommended by the YouTube recommendation engine, several of these videos had titles containing strings of seemingly random words that may be designed to appeal to the recommendation engine or the search terms that users typically use when looking for children's content (e.g., "SUPERHERO BABIES MAKE A GINGERBREAD HOUSE SUPERHERO BABIES PLAY DOH CARTOONS FOR KIDS").

Meanwhile, the five videos intended for a general audience and featuring a child that received the most views during the week of the study period were largely posted by parenting and family vlogs and included baby name reveals or new baby introduction videos. And the five most-viewed videos that were both intended for children and featured a child tended to involve children dressing up, singing or engaging in make-believe activities either alone or with adults.

Examples of popular YouTube videos intended for (or featuring) children

Top five most-viewed English-language videos posted by popular YouTube channels during the first week of 2019 in the following categories

Intended for children (*not* featuring a child)		**Intended for children (featuring a child)**		**General audience (featuring a child)**	
TITLE	VIEWS	TITLE	VIEWS	TITLE	VIEWS
SUPERHERO BABIES MAKE A GINGERBREAD HOUSE SUPERHERO BABIES PLAY DOH CARTOONS FOR KIDS	13,936,031	Jannie Pretend Play w/ Kids Make Up Toys & Dress Up as Cute Disney Princesses	8,181,990	Our Baby's Official NAME REVEAL !!!	7,641,126
Learn Colors Kinetic Sand Coffee Box Animals Baby Boong Toys Nursery Rhymes For Kids	9,476,262	Funny Uncle John Pretend Play w/ Pizza Food Kitchen Restaurant Cooking Kids Toys	6,110,694	Everleigh meets her New Baby Sister for the Very First Time!!!	7,184,316
The Car Color Song + More Nursery Rhymes - CoComelon	8,071,925	Vlad and Nikita build colored Playhouses	5,627,725	WELCOMING A NEW MEMBER OF THE FAMILY!!	6,004,365
No No, Baby Rides the Scooter! | No No Song +More Nursery Rhymes by Little Angel	6,313,603	Stacy pretend play with magical toy food	4,264,347	Bringing Baby Posie Home From The Hospital!!!	5,547,407
Traffic Safety Song | CoComelon Nursery Rhymes	5,311,461	Wendy Pretend Play w/ Guitar Toy as Disney Princess Elena & Sings Nursery Rhymes Kids Songs	3,199,749	REAL vs PRANK SLIME CHALLENGE!!!	4,761,212

Note: Videos identified as being intended for children and/or including a child under the age of 13 by human coders.
Source: Analysis of English-language videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API.
"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

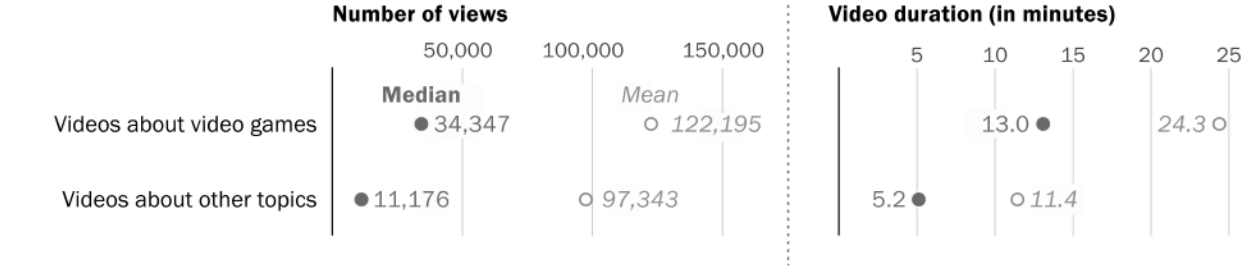
Videos about video games among the most common, most-viewed and lengthiest videos posted by popular channels on YouTube during this period

Video games were a frequent and highly watched topic on popular YouTube channels during the week, comprising the most common (non-miscellaneous) topic on the platform in this study. Many of these videos consisted of people using social gaming platforms like Twitch and Discord to

stream a webcast of themselves playing video games such as Fortnite and Minecraft while they talked with their online friends. Other videos consisted of trailers for upcoming video games, as well as compilations of "fails" and other exciting or amusing moments drawn from captured video game footage.

Videos about video games were longer, received substantial number of views relative to other types of content

Median/mean ____ for English-language videos in each category posted to popular YouTube channels in first week of 2019



Note: Videos categorized by human coders.
Source: Analysis of English-language videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API.
"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

Nearly one-in-five (18%) videos uploaded by popular channels during the week pertained to video games, and these videos received an average of 122,195 views, compared with 97,343 for other types of videos. The median video game video – more representative of the typical video uploaded in the category – received nearly three times as many views as the median video for all other categories collectively (34,347 vs. 11,176). Gaming videos were also typically much longer than videos pertaining to other topics, averaging 24 minutes long (median of 13 minutes) compared with 11 minutes (median of 5 minutes) for non-gaming videos.

English-language videos relating to current events or politics tended to have an international focus, received fewer views than videos on other topics

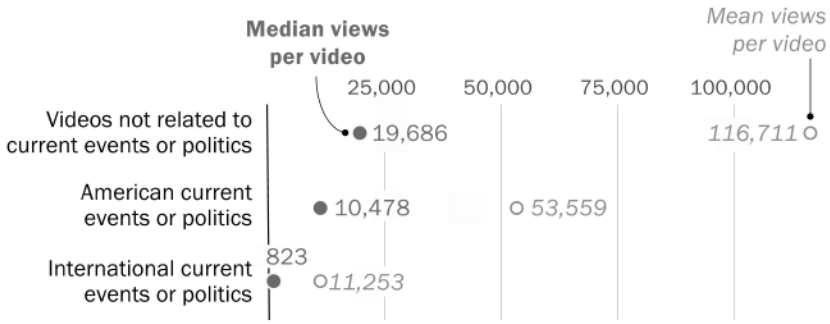
A recent study by the Center found that the share of YouTube users who get news there nearly doubled between 2013 (20%) and 2018 (38%). This new analysis finds that videos related to current events or politics were one of the most common categories posted by these popular channels. Such videos – which include any videos with a focus on a broad set of topical issues such as government, world events, social issues, politics and local news – comprised 16% of all English-

language videos uploaded during the week.[5] However, just 4% of English-language videos posted by these popular channels contained content related to *American* current events or politics. In other words, three-quarters (76%) of English-language videos posted by popular YouTube channels that related to current events or politics did *not* mention events, issues, or opinions related to the United States (in either a domestic or international context).

Channels that posted videos related to current events or politics during the first week of 2019 tended to upload much more content than other channels overall. Channels that posted one or more videos relating to American current events or politics uploaded an average of 63 total videos during the week (median of 36), while comparable channels with an international focus uploaded an average of 43 videos (15 median). In contrast, channels that did not post any content related to current events or politics during the week uploaded an average of just four new videos (2 median).

Videos focused on international current events received relatively few views during study period

Median/mean views for English-language videos in each category posted to popular YouTube channels in first week of 2019



Note: Videos categorized by human coders.
Source: Analysis of English-language videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API.
"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

Although a large number of English-language videos related to current events or politics were posted by popular channels during the first week of 2019, these videos received on average only about one-fifth of the views that other types of videos received during that time. However, this is largely due to extremely low viewership numbers for English-language content with a focus on international events: Current events or politics videos with a U.S. focus posted by these channels received several times as many views as their international counterparts (mean of 53,559 with a U.S. focus vs. 11,253 international; medians of 10,478 and 823, respectively). Videos related to current events or politics also appeared to draw less interest over

[5] "Current events or politics" videos only included discussion of nonpolitical public figures if the subject being discussed was itself political. For example, an update about a Hollywood star announcing a new movie would not be included, but a clip of her engaging in a political debate would be. Similarly, a broadcast of anchors on a local morning show cooking a new recipe would not count as "current events or politics," but a clip from the same show discussing local business news or the weather forecast would count.

time and received fewer additional views after their initial day of publication than other types of videos, and this was especially true of videos with an international focus.

3. Certain keywords in video titles and descriptions were associated with more views

Many YouTube videos are uploaded with attention-grabbing titles – and also with detailed descriptions that contain information about the content of the video, the video creator, and external references to related materials such as news articles or other social media accounts. In addition to the human coding content analysis described in detail in Chapter 2, Pew Research Center also conducted an exploratory analysis of these text snippets to gain additional insight into the content of videos that were posted by popular channels in the first week of 2019.[6]

To focus on words that represented widespread and general topics, rather than names or terms specific to particular channels, researchers collected words that were mentioned in the titles of at least 100 different videos published by at least 10 different channels (353 words met this threshold).[7] From this set of words, researchers identified those terms that were associated with much higher view counts by comparing the median number of views for videos that mentioned a particular word in their titles to the median for videos that didn't mention the word.[8] This analysis reveals that videos mentioning specific keywords like "Fortnite" and "ASMR" (Autonomous Sensory Meridian Response – a popular genre on YouTube) in their titles tended to receive more views than those that did not mention those words. Similar patterns also emerged in the topical subsets of videos identified in the Center's coding process.

Videos received more views when they mentioned certain keywords in their title

Examining the 20 terms most strongly associated with greater view counts reveals a variety of patterns (for a full list of these 20 keywords, see Appendix C). Some of these keywords appear to be related to particular topics that performed well during the week, including video games ("Fortnite," "PUBG," "FIFA," "Roblox"), toys and children's content ("slime," "rainbow"), sports ("NFL," "NBA"), and food ("eating"). Other keywords appear to represent popular video genres ("ASMR," "moment," "prank," "hack," "mystery") and attempts to grab the attention of would-be viewers ("worst," "ultimate," "insane").

The word "Fortnite" – referring to the popular online video game – was associated with the largest increase in views out of all of the words examined, and it was also by far the most common of the top 20 most-viewed words. Videos with

[6] This keyword analysis was conducted on the same subset of coded English videos analyzed in Chapter 2.
[7] Some relatively uninformative or ambiguous words were excluded from this analysis; see Methodology for details.
[8] All reported differences are statistically significant ($p<=0.05$).

"Fortnite" in their title comprised 15% of all video game-related videos uploaded by popular channels during the week.

Within topical categories, certain title keywords were associated with greater number of views

In addition to examining the top keywords associated with higher view counts overall, this analysis also highlights how certain keywords are linked with greater viewership within topical areas.

In some instances, these keywords appear to highlight specific subtopics that perform especially well but that do not have broader appeal outside of that topic. For example, beauty or fashion videos were not notably more popular than other video topics overall, but videos

Title keywords associated with increase in view counts varied by video category

Title keywords associated with the largest increase in median view counts among English-language videos about ____ posted to popular YouTube channels in the first week of 2019

CATEGORY	KEYWORD	NUMBER OF VIDEOS	% DIFFERENCE IN MEDIAN VIEWS
Miscellaneous or other	ASMR	115	+484
	Challenge	281	+351
	Prank	113	+332
	Superhero	113	+196
	Box	133	+161
Beauty or fashion	Makeup	142	+401
Current events or politics (international)	China	130	+349
	Woman	153	+163
	Police	107	+76
Video games	Moment	248	+330
	Funny	214	+320
	Fortnite	778	+165
	Team	166	+124
	FIFA	151	+55
Music or dance	Lyric	150	+238
	Song	215	+231
	Cover	105	+192
	Feat.	100	+108
	Remix	127	+77
Toys or games *(apart from video games)*	Kid	241	+161
	Play	155	+142
	Learn	146	+101
Current events or politics (U.S.)	Trump	475	+93
	President	114	+89
Creativity, skills, or learning	Easy	105	+46
	DIY	134	+39
	Kid	102	+24

Note: Videos were categorized into topics by human coders. For the topical categories food or nutrition; consumer tech; vehicles; and sports, fitness or physical activities, no terms were used frequently enough or were associated with statistically significant differences in views. The word "Trump" was associated with higher view counts for international current events or politics videos, but researchers determined this was due to measurement error in about 2% of the videos in this category.
Source: Analysis of 353 common terms found in the titles of English-language videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API.

PEW RESEARCH CENTER

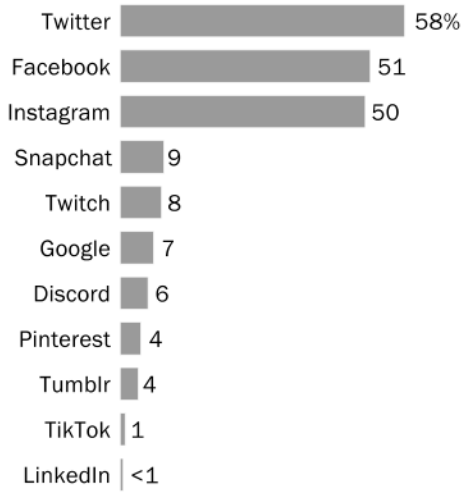
within this topic that mentioned the word "makeup" in their titles performed especially well compared with other videos in that topic.

In other cases, specific words appear among the top keywords for videos in multiple topical areas. The word "kid," for example, is associated with greater viewership among videos pertaining to both toys or games, as well as creativity, skills or learning.

Similarly, the word "Trump" appears as a popular keyword for videos focused on U.S. politics or current events. Within the subset of English-language videos pertaining to U.S. current events or politics, just two of the 353 popular keywords examined were associated with significantly higher view counts relative to videos in this category that did not use those terms: "Trump" and "president." Of the 1,405 English-language videos related American current events or politics posted by these popular channels during the first week of 2019, over a third (36%) mentioned one of these two words in their title, and these videos received nearly twice as many views at the median as did comparable videos posted during the same time period that did not mention Trump.[9]

Sizable shares of video descriptions mentioned other social platforms

% of English-language videos posted by popular YouTube channels that mentioned keywords related to ____ in their descriptions



Source: Analysis of keywords found in the descriptions of English-language videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API. "A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

Seven-in-ten videos cross-linked to other social media platforms

YouTube producers often include in their video descriptions not just information about the video itself, but also links to additional online content – including their social media accounts and personal websites. Across all English-language videos uploaded by popular channels during the first week of 2019, fully 70% mentioned another prominent social media platform in their description.[10] The most commonly referenced social platforms were Twitter (58% of all videos), Facebook (51%) and Instagram (50%), followed by Snapchat (9%). Social gaming services Twitch

[9] Human coders hand-labeled a random sample of 200 American news and politics videos as mentioning the president or not, then compared their decisions to a simple search using the keywords "Trump" and "president." Agreement was nearly perfect, with a Krippendorf's alpha score of 0.97.

[10] Two Center coders labeled a sample of 200 random video descriptions and categorized them based on whether or not they mentioned another social media platform. Agreement between the coders and the regular expression pattern was high, with Krippendorf's alpha between 0.76 and 0.92. Agreement between the coders themselves was 0.85.

and Discord were also mentioned in the descriptions of 8% and 6% of all videos, and 34% and 21% of all video game-related videos, respectively.

Mentioning other social media platforms appears to be associated with higher view counts overall: Videos that did this received an average of 111,912 views (19,962 median), compared with 78,757 (6,295 median) for videos that did not mention an external social media platform.

Acknowledgments

This report is a collaborative effort based on the input and analysis of the following individuals. Find related reports online at pewresearch.org/internet.

Primary researchers

Patrick van Kessel, *Senior Data Scientist*
Skye Toor, *Data Science Assistant*
Aaron Smith, *Director of Data Labs*

Research team

Lee Rainie, *Director, Internet and Technology research*
Onyi Lam, *Computational Social Scientist*
Adam Hughes, *Associate Director of Research*
Dennis R. Quinn, *Computational Social Scientist*
Stefan Wojcik, *Computational Social Scientist*
Emma Remy, *Data Science Assistant*
Brian Broderick, *Data Science Engineer*

Editorial and graphic design

Alissa Scheller, *Information Graphics Designer*
David Kent, *Copy Editor*

Communications and web publishing

Shawnee Cohn, *Communications Manager*
Rachel Weisel, *Senior Communications Manager*
Travis Mitchell, *Digital Producer*
Sara Atske, *Associate Digital Producer*

Methodology

The analysis in this report is based on an examination of videos published the first week of 2019 on YouTube channels with at least 250,000 subscribers. Because there is no exhaustive or officially sanctioned list of all videos or channels (of any size) on YouTube, Pew Research Center developed its own custom list of 43,770 channels that had at least 250,000 subscribers.

How we mapped channels

This Pew Research Center analysis is based on a previous study of YouTube. Using several recursive and randomized methods, we traversed millions of video recommendations made available through the YouTube API, searching for previously unidentified channels. As of July 2018, 915,122 channels had been found, 30,481 of which had at least 250,000 subscribers – defined, for the purposes of this study, as "popular channels." Between July and December 2018, we continued to search for new channels, and by Dec. 25, 2018, a total of 1,525,690 channels had been identified, 43,770 of which were considered popular based on the criteria of this study. Of the 13,289 new popular channels that had been identified, just 3,600 had not been previously observed, while 9,689 had already been identified but had not yet passed the 250,000 subscribers threshold in July. In other words, the list of popular channels was expanded by 12% during this period through additional mapping efforts, while it grew an additional 32% naturally through increasing channel subscription rates. That an additional six months of mapping yielded only a 12% increase in coverage suggests that the Center had already successfully found the overwhelming majority of popular channels on YouTube.[11]

Starting on Jan. 1, 2019, we began scanning the 43,770 popular channels to identify all the videos that each channel had published the previous day. Because of variation in when a video was posted and when we identified it, each video was observed between 0 and 48 hours after it was first published; the average video was observed 22 hours after being uploaded. Once a video was identified, we tracked it for a week, capturing its engagement statistics every day at the same hour of its original publication.

The video data collected includes:

- Video ID
- Title and description
- View count

[11] Furthermore, the 3,600 popular channels that were newly identified between July and December 2018 produced just 808 English-language videos in the first week of 2019. All other English-language videos analyzed in this study were produced by channels that had already been identified by July 2018.

- Number of comments
- Top 10 comments
- Number of likes and dislikes
- YouTube categories and topics
- Duration
- Date/time published (UTC)
- Channel ID
- Channel subscriber count

Filtering to English videos

After the video collection process was complete, we examined and classified the subset of videos that were in English. The YouTube API can provide information on the language and country associated with any given channel and/or video, but this information is often missing. Of the 24,632 channels that uploaded a video in the first week of 2019, 73% had available information on their country of origin, and 8% had information on the channel's primary language. Across the 243,254 videos published by popular channels during the week, 61% had information on the language of their default audio track, and just 26% had information on their default language. (YouTube's API documentation does not make clear the difference in these values, but one may be self-reported and the other automatically detected by YouTube.) Since some of these values may be self-reported, unverified and/or contradictory, we needed to develop a way to fill in the missing information and correctly determine whether a video contained content in another language or not.

First, the Center coded a sample of videos for (a) whether the video's title was in English and (b) whether the audio was in English, had English subtitles, or had no spoken language at all. Two different Center coders viewed 102 videos and achieved a 0.94 Krippendorf's alpha, indicating strong agreement. A single coder then classified a sample of 3,900 videos, and this larger sample was used to train a language classification model.

We trained an XGBoost classifier to run through the entire database of videos to categorize each one's language using the following parameters:

- Maximum depth of 7
- 250 estimators
- Minimum child weight of 0.5
- Balanced class weights (not used for scoring)
- Evaluation metric: binary classification error

The classifier used a variety of features based on each video's title, description, channel attributes, and other metadata when making predictions.

Language detection features

The Center used the langdetect Python package to predict the language of different text attributes associated with each video, with each video represented as a list of probabilities for each possible language. These probabilities were computed based on the following text attributes:

- The channel's title
- The channel's description
- The video's title
- The video's description
- The channel and video's titles and descriptions all combined into one document
- The concatenated text of the video's first 10 comments

Country and language codes

Videos were assigned binary dummy variables representing the following country and language codes based on metadata returned by the YouTube API:

- The country code associated with the video's channel
- The language code associated with the video's channel
- The video's "language" code
- The video's "audioLanguage" code

Additional features were added to represent the overall proportion of videos with each language code across all videos that the channel had produced in the first week of 2019. Each video's language was represented by the video's "audioLanguage" code where available; otherwise the "language" code was used. This was based on the hypothesis that information about the other videos produced by a given channel may help predict the language of videos from that channel with missing language information (e.g., if a channel produced 100 videos, 90 of which were labeled as being in Armenian, and 10 of which were missing language information, it is likely that those 10 videos were also in Armenian.)

English word features

We also computed additional language features based on whether or not words present in the text associated with each video could be found in lists of known English words. Six different text representations were used:

- The channel's title
- The channel's description
- The video's title
- The video's description
- The channel and video's titles and descriptions all combined into one document
- The concatenated text of the video's first 10 comments[12]

For each text representation, the text was split apart on white space (i.e., words were identified as sets of characters surrounded by white space-like spaces and tabs) and the following three features were computed:

- Proportion of words found in WordNet's English dictionary
- Proportion of words found in NLTK's words corpus
- Proportion of words found in either WordNet or NLTK

Text features

Additional features were extracted in the form of TF-IDF (term frequency, inverse document frequency) matrices. Each video was represented by the concatenation of its title and description, as well as the title and description of its channel.

Two matrices were extracted, one consisting of unigrams and bigrams, and another representing 1-6 character ngrams, both using the following parameters:

- Minimum document frequency of 5
- Maximum document proportion of 50%
- L2 normalization
- 75,000 maximum features

Time of publication

Finally, researchers added an additional feature, an integer representing the hour in which the video was published (UTC), on the assumption that English videos may be more likely to be published during certain times of the day due to geographic differences in the distribution of English and non-English YouTube publishers.

The classifier achieved 98% accuracy, 0.96 precision and 0.92 recall on a 10% hold-out set, and an average of 97% accuracy, 0.91 precision, and 0.93 recall using 10-fold cross-validation. To achieve

[12] The first 10 comments for each video were collected using the YouTube API between Feb. 7-13, 2019.

a better balance between precision and recall, a prediction probability threshold of 40% was used to determine whether or not a video was in English, rather than the default 50%.

Codebook

To assess the content of videos that were uploaded by popular channels, we developed a codebook to classify videos by their main topic and other attributes. The full codebook can be found in Appendix D. Coders were first instructed to indicate whether they could view the video. Then, to filter out any false positives from the supervised classification model, coders were asked to indicate whether the video contained any prominent foreign language audio or text. If a video was fully in English, coders then recorded the video's main topic, whether or not it appeared to be targeted exclusively toward children, whether it appeared to feature a child under the age of 13, and for news content, whether or not the video mentioned U.S. current events. In-house coders used the codebook to label a random sample of 250 videos and computed agreement using Krippendorf's alpha. All codebook items surpassed a minimum agreement threshold of 0.7.

Agreement between Center coders

CODEBOOK ITEM	KRIPPENDORF'S ALPHA
Viewable	0.95
Foreign language	0.72
Video topic	0.80
Children's content	0.86
Features child	0.76
American news	0.91

"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

The Center then ran a pilot test of the same 250 videos on Amazon Mechanical Turk, in which three separate Mechanical Turk workers were asked to code each video. Their responses were then reconciled into a single value for each item, using a threshold that maximized agreement with the in-house coders.[13] In-house coders resolved their disagreements to produce a single benchmark for comparison with Mechanical Turk.

Agreement thresholds varied for each item, depending on the difficulty of the task. For example, identifying videos with content in another language required close attention, since those that were missed by the automated classification were often lengthy and appeared to be in English. Coders had to search for non-English content carefully, and in-house coders were more likely to notice it than were Mechanical Turk workers. Accordingly, the Mechanical Turk results agreed most closely with the in-house results when a video was marked as containing content in another language if just one of the three Turk workers marked it as such. In contrast, identifying

[13] For categories that were dependent on other classifications (i.e., a video being viewable, being in English, or pertaining to news or politics), researchers compared the subset of videos where both coders agreed on the dependency.

children's content involves a lot of subjective judgment, and in-house researchers only marked videos that were clear and obvious. Mechanical Turk workers were less discerning, so in this case, in-house judgments were most closely approximated by marking videos as children's content only when all three Mechanical Turk workers did so. Across all items, this process produced high rates of agreement.

After determining the thresholds that produced results that closely approximated in-house coders, we selected all videos that had been classified as English content, filtered out those that had been removed, and sent the remaining 42,558 videos to Mechanical Turk for coding.[14] Coding took place between April 12-14, 2019.

Agreement between Center and Mechanical Turk coders

Krippendorf's alpha, expert consensus vs. Mechanical Turk workers at different thresholds

CODEBOOK ITEM	1 OUT OF 3	2 OUT OF 3	3 OUT OF 3
Viewable	1.00*	0.97	0.88
Foreign language	0.82*	0.69	0.54
Video topic	0.82	0.86*	0.65
Children's content	0.69	0.91	0.93*
Features child	0.61	0.83*	0.75
American news	0.75	0.84*	0.18

*indicates the threshold that was used to maximize agreement

"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

Agreement between Center and Mechanical Turk coders

CODEBOOK ITEM	MECHANICAL TURK THRESHOLD	KRIPPENDORF'S ALPHA
Viewable	1 out of 3	1.00
Foreign language	1 out of 3	0.82
Video topic	2 out of 3 *(otherwise mark as "general")*	0.86
Children's content	3 out of 3	0.93
Features child	2 out of 3	0.83
American news	2 out of 3	0.84

"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

Data processing

Across the full set of 243,254 videos for which data were collected, we intended to capture seven snapshots consisting of each video's engagement statistics (and those of its authoring channel). The first of the seven snapshots was taken at the time each video was first identified, and the six additional snapshots were each taken during the hour of initial publication for the next six days. To this dataset, we also added rows representing each video's time of publication, with engagement statistics set to zero. Altogether, we expected each video to produce eight rows of data, totaling 1,946,032 time stamps. However, due to infrequent API errors and videos being removed, 78,273 time stamps (4%) were

[14] Researchers checked the API for removed videos on April 10, 2019.

not captured successfully. Of the 243,254 unique videos, 17% (41,883) were missing information for a single time stamp during the week, and 6% (13,704) were missing more than one day.

Fortunately, many of the missing time stamps occurred between the first and last day of the week, allowing us to interpolate the missing values. In cases where there was data available before and after a missing time stamp, missing values for continuous variables (e.g. time and view count) were interpolated using linear approximation. After this process, less than 2% of all videos (4,262) were missing any time stamps, most likely because they were removed during the week. The same method was used to fill in 354 time stamps where videos' channel statistics were missing, and 13, 22 and 26,351 rows where the YouTube API had erroneously returned zero-value channel video, view, and subscriber counts, respectively.

Keyword analysis

To focus on words that represented widespread and general topics – rather than names or terms specific to particular channels – the Center examined 353 words that were mentioned in the titles of at least 100 different videos published by at least 10 different channels. To a standard set of 318 stop words, researchers added a few additional words to ignore – some pertaining to links ("YouTube", "www", "http", "https", "com"), others that ambiguously represented the names of multiple content creators and/or public figures ("James", "Kelly", "John"), and the word "got," which was relatively uninformative. The remaining set of 353 words was examined across all videos, as well as within topical subsets of videos.

The Center compared the median number of views for videos that mentioned each word in their titles to the median number of views for videos that didn't mention the word, then identified those associated with positive differences in median views. To confirm these differences, the Center ran linear regressions on the logged view count of the videos in each subset, using the presence or absence of each word in videos' titles as independent variables. All words that appeared in the titles of at least 100 videos in each subset (and published by at least 10 unique channels) were included in this set of independent variables. All reported keyword view count differences were significant at the $p <= 0.05$ level.

The Center also examined words in videos' descriptions associated with links to external social media platforms. Researchers examined several random samples of videos and developed a list of keywords related to social platforms that appeared commonly in the videos' descriptions. This list was then used to build a regular expression designed to match any descriptions that contained one or more the keywords:

facebook|(fb\W)|twitter|tweet|(tw\W)|instagram|(ig\W)|(insta\W)|snapchat|(snap\W)|twitch|discord|tiktok|(tik tok)|pinterest|linkedin|tumblr|(google \+)|(google\+)|(g\+)

Two Center coders then examined a sample of 200 random video descriptions and coded them based on whether or not each video linked to one of the following social media platforms: Facebook, Twitter, Instagram, Snapchat, Twitch, Discord, TikTok, Pinterest, LinkedIn, Tumblr and Google+. The two Center coders achieved a high level of agreement between themselves (Krippendorf's alpha of 0.85), as well as with the regular expression pattern (Krippendorf's alphas of 0.76 and 0.92).

Appendix A: Most active popular channels by language

Most active channels that produced videos ...

Exclusively in English

CHANNEL	TOTAL VIDEOS
ESPN	161
Fox Business	153
NHL	145
Access	144
FreeDawkins	140
Sarah and Melanie Live	133
CBS News	123
MLG Highlights	106
MSNBC	106
NBA	91

Exclusively in other languages

CHANNEL	TOTAL VIDEOS
YTN News	1,103
Polimer News	887
Manorama News	878
DesiFeed Video	817
Ennahar tv	797
GMA News	785
dmc	726
Thairath	724
Pressnews tv	723
News7 Tamil	689

In both English and other languages

CHANNEL	VIDEOS IN ENGLISH	VIDEOS IN OTHER LANGUAGES	TOTAL VIDEOS
KBS News	6	693	699
News18 Odia	1	472	473
PTV	36	437	473
AP Archive	259	210	469
TEDx Talks	282	161	443
Newsfirst Sri Lanka	82	354	436
MediaoneTV Live	1	434	435
NewsX	247	170	417
24 News HD	1	409	410
Channels Television	367	41	408

"A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

Appendix B: Most popular videos in first week of 2019, by category

Most popular video in each category from first week of 2019

CATEGORY	TITLE	VIEWS
General	Famous Cars	17,381,128
Music or dance	Chris Brown - Undecided (Official Video)	12,968,205
Sports	India take stranglehold on SCG contest | Fourth Domain Test	11,245,492
Hobbies or skills	Learn Colors Kinetic Sand Coffee Box Animals Baby Boong Toys Nursery Rhymes For Kids	9,476,262
Toys aor games	3 Colors Play Doh Ice Cream Cups LOL Surprise Shopkins Kinetic Sand Yowie Kinder Surprise Eggs	9,209,026
Video games	33 KILLS in Solo Squads...	8,081,452
Beauty or fashion	Drive-Thru Does Our Makeup feat. Trisha Paytas	5,863,408
Current events or politics (U.S.)	CNN reporter presses Trump: You promised Mexico would pay for wall	4,525,881
Consumer tech	2019 Tech I'm Ready For!	3,172,721
Food	KFC Bargain Feast - Fills the stomach without feeling the pinch	3,154,568
Vehicles	Picking Up Uber Riders In A Lamborghini Huracan!!!	1,678,688
Current events or politics (international)	China Lands on FAR SIDE of Moon - Alien Base Photos Imminent?	1,531,569

"A Week in the Life of Popular YouTube Channels."

PEW RESEARCH CENTER

Appendix C: 20 title keywords associated with largest increase in median views

'Fortnite,' 'ASMR,' 'slime' top list of title keywords associated with more views

Among English-language videos posted to popular YouTube channels in the first week of 2019, the 20 title keywords associated with the largest increase in median view counts

KEYWORD	NUMBER OF VIDEOS	DIFFERENCE IN MEDIAN VIEWS RELATIVE TO VIDEOS **NOT** USING KEYWORD
Fortnite	808	496%
ASMR	157	454%
Slime	177	440%
Rainbow	103	435%
Prank	134	416%
Worst	139	405%
NFL	107	381%
Makeup	184	377%
Moment	435	360%
Wrong	159	314%
Eating	121	314%
PubG	126	311%
NBA	333	308%
Ultimate	325	285%
Hack	183	279%
FIFA	180	271%
Player	236	269%
Mystery	104	264%
Insane	120	264%
Roblox	340	264%

Source: Analysis of 353 common terms found in the titles of English-language videos posted Jan. 1-7, 2019, by YouTube channels with at least 250,000 subscribers, collected using the YouTube Data API. "A Week in the Life of Popular YouTube Channels"

PEW RESEARCH CENTER

Appendix D: Content analysis codebook

Instructions

Please examine the following video. You are not expected to watch the entire video, but you need to click through it and watch enough that you can answer the questions below with confidence. Make sure that you have Google Translate or similar tools disabled. As you make your selections for this video, make sure you have first reviewed and familiarize yourself with all of the possible options. Remember that some videos may look like they have been removed, but they can still be viewed on YouTube if you click on them. When deciding whether a video is in English, be especially careful to click through to different parts of the video – some videos start in English but have prominent segments (like news interviews) that switch to a different language.

1. Are you able to view the video here or on YouTube.com?

A) Yes
B) No

- Some videos may have restricted playback and can only be viewed on the YouTube website – but they have NOT been removed.

2. Skip this video if it contains prominent non-English text without translation OR a segment in a foreign language without subtitles.

A) Continue
B) Skip (contains untranslated foreign language)

- Skip if the video has segments where a foreign language is spoken with no English translation or subtitles present. If there are any parts of the video where viewers are expected to understand a foreign language, skip it. If non-English text can be seen in the video preview screenshot, this is a good indication it is intended for a non-English audience.

Example	Explanation
A video that's in English but important text on the screen (headlines, etc.) is not in English	Skip
A video that's mostly in English but some parts are in a foreign language	Skip
A video that's in English but the video's title is completely in a foreign language	Skip
A music video in a foreign language	Skip
A video that does not have direct dialogue but people in the background can be heard speaking in a foreign language	Skip

A video that's in English but the video's title has foreign language text in addition to a meaningful title in English	Continue
A video that's in a foreign language but the entire video is subtitled in English and the subtitles were NOT auto-generated by YouTube	Continue

3. What is this video about?

A) Miscellaneous or Other (general entertainment, vlogs, celebrity news, skits, movies, talk shows, pop culture, human interest pieces, cartoons, comics, religion, astrology, paranormal, animals, pets, ASMR, etc)
B) Video Games (fortnite, pubg, xbox, playstation, nintendo, minecraft, sports/vehicle video games, esports, footage of mobile games for kids, video game animations)
C) Toys or Games (physical toys, not video games – lego, nerf, playdoh, slime, figurines, kids playing with toys, stop-motion animation with toys)
D) Music or Dance (music videos, nursery rhymes, sing-alongs, soundtracks, instrument tutorials, performances/concerts/competitions, musician interviews)
E) News or Politics (government, political debates, world events, social issues, business/science news, local news, political conspiracies (NOT celebrity news))
F) Sports, Fitness, or Physical Activities (football, basketball, soccer, martial arts, golf, WWE, yoga, bodybuilding, biking, surfing, skateboarding, archery, shooting, athlete interviews)
G) Vehicles (cars, racing and motorsports, motorcycles, aircraft, trains, boats and sailing, RC vehicles (NOT vehicle video games))
H) Food or Nutrition (recipes, cooking, healthy eating, diet, weight loss, bartending, restaurants, meals)
I) Beauty or Fashion (makeup, cosmetics, clothes, shoes, jewelry, hairstyling, nails)
J) Creativity, Skills, or Learning (arts, crafts, design, life hacks, DIY, home experiments, language/math/science lessons, photography, home improvement, gardening, programming lessons, software tutorials)
K) Consumer Tech (tech products like phones, computers, miscellaneous apps and gadgets that don't clearly pertain to a specific category above)

- Select the category that describes what the people are talking about or doing. MISCELLANEOUS OR OTHER will probably be the most common category. If the video does not clearly fit in any of the more specific categories, select OTHER. Some videos may fall in multiple categories; pick the best fit.

Example	Explanation
A musician talking about politics	NEWS OR POLITICS – focus on what the people are talking about
Someone playing a soccer video game	VIDEO GAMES – don't get tricked by a specific genre of video game
Footage of a mobile game for kids that features cartoons	VIDEO GAMES – if it were just a cartoon, you would pick OTHER, but since it's from a video game, mark it that way
Someone talking about their favorite comic book characters	OTHER

Someone drawing their favorite comic book characters	CREATIVITY, SKILLS, OR LEARNING – because the video is about their artwork
A family/kids video on how to make slime at home	CREATIVITY, SKILLS, OR LEARNING – because the video is about how to MAKE slime; if instead the video mainly consists of kids playing with it, then mark it as TOYS OR GAMES
TV show about a dance competition	MUSIC OR DANCE – you might be inclined to mark it as OTHER or SPORTS, FITNESS, OR PHYSICAL ACTIVITIES but dance is an exception and belongs with MUSIC AND DANCE
Conspiracy theories about bigfoot's existence	OTHER
Conspiracy theories about the government covering up bigfoot's existence	NEWS OR POLITICS – because the video discusses a conspiracy about a government cover-up
News or conspiracy about a video game company	VIDEO GAMES – if news story in the video pertains to a specific category, pick the more specific category instead of NEWS OR POLITICS. Same goes for news about fashion companies, cars, sports, and so on.
News about a celebrity getting divorced	OTHER – celebrity news and pop culture don't count as NEWS OR POLITICS, but if the focus is on a celebrity making a political statement or expressing an opinion about a prominent social issue, then it would count as NEWS OR POLITICS in that case.
Trailer for an upcoming movie	OTHER
A video of a children's coloring book app	CREATIVITY, SKILLS, OR LEARNING – because it's not really a video game, and the focus is on coloring rather than 'playing' something

4. CHILDREN'S CONTENT: The video is clearly intended for young children under 13

A) Yes
B) No

- Do NOT mark if it's a video that parents might enjoy too. Tends to be very obvious – animations, toys, nursery rhymes and sing-alongs, extremely simple kids video games, etc. Things that adults or teenagers would definitely not watch or be interested in – you know it when you see it.

Example	Explanation
Nursery rhymes or sing-alongs	Yes
Animated children's cartoons	Yes
Toy 'unboxing' videos	Yes
An extremely simple video game clip with cartoons	Yes – probably. In some cases it's obvious – it's a simple and flashy video game, no one's narrating, it's something that a young child would watch but not an older child or adult. However, in other cases, some

	kid-oriented video games are still popular among adults and older children (like Pokemon). Usually you can tell the difference based on whether there's an adult or teenager talking about the game. If not, its target audience is probably children – but always pause to consider the possibility that an older audience might also find the video interesting or entertaining.
An teenager or adult doing or talking about something that's popular among children (video games, comic books, figurines, collectables)	No (usually). Videos sometimes feature content that may appeal to both younger children as well as older children or adults. You can often tell whether the video is clearly aimed at kids based on the language and tone of the speaker(s).
A family video where both the children and parents are talking	It depends. Some videos are aimed at family audiences (both kids and their parents) rather than children exclusively. If it's a video of a parent filming their kids playing with toys and the kids are the main focus, then it probably counts. If at some point the parent turns the camera and begins talking about their thoughts on parenting, then it probably doesn't count.

5. FEATURES CHILD: Clearly features a young child under 13 directly participating in the video (excluding certain professional performances

A) Yes
B) No

- The child must be visible. News footage and professional performance coverage (e.g. sports broadcasts, awards shows) does NOT count.

Example	Explanation
A children's video featuring kids playing, singing, etc.	Yes
Non-professional recording of a child performing in a non-professional manner	Yes
A home video of a parent filming their kids	Yes
A children's cartoon where you can hear what sounds like kids talking or giggling	No
Footage of a TV news interview with a child	No
A televised performance of a child at a concert, pageant, talent show, or sports event	No

6. AMERICAN NEWS: Does the video mention U.S. current events, U.S. politicians, or the U.S. government?

A) Yes
B) No

- Does the video contain news or opinions about things happening in the U.S., or the U.S. government's actions internationally?

Example	Explanation
News broadcast about a local event in a specific U.S. city or state	Yes
News broadcast about a new bill in Congress	Yes
The president making a speech	Yes
Political campaign ads	Yes
News broadcast about trends or events outside of the U.S.	No, unless the broadcast highlights relevant U.S. involvement
A foreign politician discussing their country's relationship with the U.S.	Yes
A foreign citizen's vlog where they talk about things happening in the U.S.	Yes

From: Kopec, Janice
Sent: Thu, 16 Sep 2021 20:40:56 +0000
To: Slaughter, Rebecca
Cc: Holland, Caroline; Mark, Synda; Laroia, Gaurav
Subject: (b)(5)
Attachments: (b)(5)

(b)(5)

(b)(5)

(b)(5)

From: Howard, Jennifer <jhoward1@ftc.gov>
Sent: Wednesday, September 15, 2021 7:26 PM
To: Klotz, Thomas J. <TKLOTZ@ftc.gov>; Delaney, Elizabeth A <EDELANEY@ftc.gov>; White, Katherine <kwhite@ftc.gov>; Xenakis, Stelios S. <sxenakis@ftc.gov>; Aryankalayil, Anna <aaryankalayil@ftc.gov>; Austin, Audrey <aaustin2@ftc.gov>; Merber, Kenneth <kmerber@ftc.gov>; Kopec, Janice <jkopec@ftc.gov>; Holland, Caroline <cholland@ftc.gov>; Mark, Synda <smark@ftc.gov>; Laroia, Gaurav <glaroia@ftc.gov>; Spector, Robin <rspector@ftc.gov>; Frant, Nina <nfrant@ftc.gov>; Cella, Adam <acella@ftc.gov>; Carter, Paige <pcarter@ftc.gov>; Sussman, Shaoul <ssussman@ftc.gov>; Zhao, Daniel <dzhao@ftc.gov>; Dahdouh, Thomas N. <TDAHDOUH@ftc.gov>; Abraham, Gretchen <gabraham@ftc.gov>
Cc: Kryzak, Lindsay <lkryzak@ftc.gov>; Bumpus, Jeanne <JBumpus@ftc.gov>; Vandecar, Kim <KVANDECAR@ftc.gov>; Robbins, David <drobbins@ftc.gov>; Dolan, Reilly <JDOLAN@ftc.gov>; Vedova, Holly L. <HVEDOVA@ftc.gov>; Levine, Samuel <slevine1@ftc.gov>; Meyer, Erie K <emeyer@ftc.gov>
Subject: RE: (b)(5)

Hi there-

(b)(5)

Jen Howard
Federal Trade Commission
jhoward1@ftc.gov
(b)(6)

From: Howard, Jennifer
Sent: Wednesday, September 15, 2021 2:01 PM
To: Klotz, Thomas J. <TKLOTZ@ftc.gov>; Delaney, Elizabeth A <EDELANEY@ftc.gov>; White, Katherine

<kwhite@ftc.gov>; Xenakis, Stelios S. <sxenakis@ftc.gov>; Aryankalayil, Anna <aaryankalayil@ftc.gov>; Austin, Audrey <aaustin2@ftc.gov>; Merber, Kenneth <kmerber@ftc.gov>; Kopec, Janice <jkopec@ftc.gov>; Holland, Caroline <cholland@ftc.gov>; Mark, Synda <smark@ftc.gov>; Laroia, Gaurav <glaroia@ftc.gov>; Spector, Robin <rspector@ftc.gov>; Frant, Nina <nfrant@ftc.gov>; Cella, Adam <acella@ftc.gov>; Carter, Paige <pcarter@ftc.gov>; Sussman, Shaoul <ssussman@ftc.gov>; Zhao, Daniel <dzhao@ftc.gov>; Dahdouh, Thomas N. <TDAHDOUH@ftc.gov>; Abraham, Gretchen <gabraham@ftc.gov>
Cc: Kryzak, Lindsay <lkryzak@ftc.gov>; Bumpus, Jeanne <JBumpus@ftc.gov>; Vandecar, Kim <KVANDECAR@ftc.gov>; 'Robbins, David (drobbins@ftc.gov)' <drobbins@ftc.gov>; Dolan, Reilly <JDOLAN@ftc.gov>
Subject: RE: (b)(5)

Hi there-

(b)(5)

Jen Howard
Federal Trade Commission
jhoward1@ftc.gov
(b)(6)

From: Howard, Jennifer
Sent: Friday, September 10, 2021 3:06 PM
To: Klotz, Thomas J. <TKLOTZ@ftc.gov>; Delaney, Elizabeth A <EDELANEY@ftc.gov>; White, Katherine <kwhite@ftc.gov>; Xenakis, Stelios S. <sxenakis@ftc.gov>; Aryankalayil, Anna <aaryankalayil@ftc.gov>; Austin, Audrey <aaustin2@ftc.gov>; Schwartz, David <dschwartz1@ftc.gov>; Merber, Kenneth <kmerber@ftc.gov>; Kopec, Janice <jkopec@ftc.gov>; Holland, Caroline <cholland@ftc.gov>; Mark, Synda <smark@ftc.gov>; Laroia, Gaurav <glaroia@ftc.gov>; Spector, Robin <rspector@ftc.gov>; Frant, Nina <nfrant@ftc.gov>; Cella, Adam <acella@ftc.gov>; Carter, Paige <pcarter@ftc.gov>; Sussman, Shaoul <ssussman@ftc.gov>; Zhao, Daniel <dzhao@ftc.gov>; Dahdouh, Thomas N. <TDAHDOUH@ftc.gov>; Abraham, Gretchen <gabraham@ftc.gov>
Cc: Kryzak, Lindsay <lkryzak@ftc.gov>; Bumpus, Jeanne <JBumpus@ftc.gov>; Vandecar, Kim <KVANDECAR@ftc.gov>; 'Robbins, David (drobbins@ftc.gov)' <drobbins@ftc.gov>; Dolan, Reilly <JDOLAN@ftc.gov>
Subject: (b)(5)

Hi there-

(b)(5)

(b)(5)

I will be in touch next week. Have a nice weekend!

Jen Howard
Federal Trade Commission
jhoward1@ftc.gov
(b)(6)

From: Slaughter, Rebecca
Sent: Thu, 16 Mar 2023 14:55:34 +0000
To: King, Austin (he/him)
Subject: RE: Bullets on OCM items

I am just going to say that I REALLY hope you are still asleep. And thank you.

From: King, Austin (he/him) <aking3@ftc.gov>
Sent: Thursday, March 16, 2023 4:48 AM
To: Slaughter, Rebecca <rslaughter@ftc.gov>
Subject: RE: Bullets on OCM items

Putting these all in one place in case it's useful before OCM.

(b)(5)

From: King, Austin (he/him)
Sent: Wednesday, March 15, 2023 5:07 PM
To: Slaughter, Rebecca <rslaughter@ftc.gov>
Cc: Laroia, Gaurav <glaroia@ftc.gov>
Subject: Bullets on OCM items

Hi, Becca:

(b)(5)

(b)(5)

Thanks!
Austin

From: Slaughter, Rebecca
Sent: Wed, 3 Nov 2021 19:02:09 +0000
To: Greer, Kristin; Laroia, Gaurav; Kopec, Janice
Subject: RE: Draft speech for disinfo roundtable

If any of you jumped in through the zoom link, you should use this one:

(b)(6)

From: Greer, Kristin <kgreer@ftc.gov>
Sent: Wednesday, November 3, 2021 1:34 PM
To: Laroia, Gaurav <glaroia@ftc.gov>; Slaughter, Rebecca <rslaughter@ftc.gov>; Kopec, Janice <jkopec@ftc.gov>
Subject: RE: Draft speech for disinfo roundtable

(b)(5)

(b)(5)

(b)(5)

(b)(5)

Kristin N. Greer
Office of Commissioner Rebecca Kelly Slaughter
Federal Trade Commission
kgreer@ftc.gov
202-326-3228 (O) | (b)(6) (C)

From: Laroia, Gaurav <glaroia@ftc.gov>
Sent: Wednesday, November 3, 2021 11:43 AM
To: Slaughter, Rebecca <rslaughter@ftc.gov>; Kopec, Janice <jkopec@ftc.gov>
Cc: Greer, Kristin <kgreer@ftc.gov>
Subject: RE: Draft speech for disinfo roundtable

(b)(5); (b)(6)

(b)(5)

From: Slaughter, Rebecca <rslaughter@ftc.gov>
Sent: Wednesday, November 3, 2021 11:39 AM
To: Kopec, Janice <jkopec@ftc.gov>; Laroia, Gaurav <glaroia@ftc.gov>
Subject: RE: Draft speech for disinfo roundtable

(b)(5)

From: Kopec, Janice <jkopec@ftc.gov>
Sent: Wednesday, November 3, 2021 11:33 AM
To: Laroia, Gaurav <glaroia@ftc.gov>; Slaughter, Rebecca <rslaughter@ftc.gov>
Subject: RE: Draft speech for disinfo roundtable

(b)(5)

From: Laroia, Gaurav <glaroia@ftc.gov>
Sent: Tuesday, November 2, 2021 8:16 PM
To: Slaughter, Rebecca <rslaughter@ftc.gov>
Cc: Kopec, Janice <jkopec@ftc.gov>
Subject: Draft speech for disinfo roundtable

Hey Becca,

(b)(5)

Gaurav

From: Greer, Kristin <kgreer@ftc.gov>
Sent: Friday, October 29, 2021 10:03 AM
To: Slaughter, Rebecca <rslaughter@ftc.gov>
Cc: Laroia, Gaurav <glaroia@ftc.gov>; Kopec, Janice <jkopec@ftc.gov>
Subject: RE: Speaking invitation for roundtable discussion w/ Senator Luján & Free Press Action

(b)(5)

(b)(5)

Kristin N. Greer
Office of Commissioner Rebecca Kelly Slaughter
Federal Trade Commission
kgreer@ftc.gov
202-326-3228 (O) | (b)(6) (C)

From: Kopec, Janice <jkopec@ftc.gov>
Sent: Thursday, October 28, 2021 4:45 PM
To: Greer, Kristin <kgreer@ftc.gov>; Slaughter, Rebecca <rslaughter@ftc.gov>
Cc: Laroia, Gaurav <glaroia@ftc.gov>
Subject: RE: Speaking invitation for roundtable discussion w/ Senator Luján & Free Press Action

(b)(5)

From: Greer, Kristin <kgreer@ftc.gov>
Sent: Thursday, October 28, 2021 4:14 PM
To: Slaughter, Rebecca <rslaughter@ftc.gov>
Cc: Kopec, Janice <jkopec@ftc.gov>; Laroia, Gaurav <glaroia@ftc.gov>
Subject: FW: Speaking invitation for roundtable discussion w/ Senator Luján & Free Press Action

(b)(5)

Kristin N. Greer
Office of Commissioner Rebecca Kelly Slaughter
Federal Trade Commission
kgreer@ftc.gov
202-326-3228 (O) | (b)(6) (C)

From: Jessica González (b)(6) @freepress.net>
Sent: Thursday, October 28, 2021 4:07 PM
To: Greer, Kristin <kgreer@ftc.gov>
Cc: Rose Lang-Masc (b)(6) @freepress.net>
Subject: Re: Speaking invitation for roundtable discussion w/ Senator Luján & Free Press Action

Kristin, we will share a run of show by end of day today.

We'll be joined by Senators Luján and Klobaucher, as well as Rep. Cárdenas. We'll also have racial justice and grassroots activists share about two minutes of remarks each about the unique harms that people of color, immigrants and non-English speaking communities are facing because of targeted disinformation campaigns. I was wondering if the Commissioner might want to go after the grassroots activists and talk about what the FTC can do to stop abusive and unfair Big Tech practices. We can also slate her up toward the top, but I know she is interested in hearing from leaders of color and might want

to respond. This order is totally up to you all, but would love to hear back today so we can finalize the run of show and send out to all.

Please advise.

Best,
Jessica

On Thu, Oct 28, 2021 at 11:51 AM Greer, Kristin <kgreer@ftc.gov> wrote:

****CAUTION**: This email originated outside the Free Press organization. Do NOT click links or open attachments unless you recognize the sender and know the content is safe. If you feel this is a suspicious email, please create a service ticket by contacting OptfinITy.**

Hi Jessica,

Thank you. Aside from reigning in Big Tech, are there other areas that you all would like for her to touch on or is she free formulate her remarks as she sees fit?

Also, is there a tentative run of show that I can share with her?

Thanks,
KG

Kristin N. Greer
Office of Commissioner Rebecca Kelly Slaughter
Federal Trade Commission
kgreer@ftc.gov
202-326-3228 (O) | (b)(6) (C)

From: Jessica González <(b)(6)@freepress.net>
Sent: Thursday, October 28, 2021 1:52 PM
To: Greer, Kristin <kgreer@ftc.gov>
Cc: Rose Lang-Maso <(b)(6)@freepress.net>
Subject: Re: Speaking invitation for roundtable discussion w/ Senator Luján & Free Press Action

Hi Kristin,

It will be on the record, we will invite congressional staff, and we may release video clips after the fact, but it will not be open to the public.

Best,
Jessica

On Thu, Oct 28, 2021 at 8:27 AM Greer, Kristin <kgreer@ftc.gov> wrote:

****CAUTION**: This email originated outside the Free Press organization. Do NOT click links or open attachments unless you recognize the sender and know the content is safe. If you feel this is a suspicious email, please create a service ticket by contacting OptfinITy.**

Thanks Jessica. One quick question. I see that this event will be open to some press, but will it be open to the public?

Kristin N. Greer
Office of Commissioner Rebecca Kelly Slaughter
Federal Trade Commission
kgreer@ftc.gov
202-326-3228 (O) | (b)(6) (C)

From: Jessica González <(b)(6)@freepress.net>
Sent: Monday, October 25, 2021 3:25 PM
To: Greer, Kristin <kgreer@ftc.gov>
Cc: Rose Lang-Maso <(b)(6)@freepress.net>
Subject: Re: Speaking invitation for roundtable discussion w/ Senator Luján & Free Press Action

Wonderful! Thank you, Kristin! We'll come back to you with further details shortly.

Best,
Jessica

On Mon, Oct 25, 2021 at 5:31 AM Greer, Kristin <kgreer@ftc.gov> wrote:

****CAUTION**: This email originated outside the Free Press organization. Do NOT click links or open attachments unless you recognize the sender and know the content is safe. If you feel this is a suspicious email, please create a service ticket by contacting OptfinITy.**

Good morning,

Thank you for this additional information. I ran everything past the Commissioner and she would be happy to participate.

Please let me know what, if anything, is needed from me at this time.

Thanks,
KG

Kristin N. Greer
Office of Commissioner Rebecca Kelly Slaughter
Federal Trade Commission
kgreer@ftc.gov
202-326-3228 (O) (b)(6) (C)

From: Jessica González <(b)(6)@freepress.net>
Sent: Monday, October 18, 2021 8:51 PM
To: Greer, Kristin <kgreer@ftc.gov>
Cc: Rose Lang-Maso <(b)(6)@freepress.net>
Subject: Re: Speaking invitation for roundtable discussion w/ Senator Luján & Free Press Action

So far Senator Luján is confirmed to attend the entire event. He is inviting Senator Kloubacher and Congressman Cárdenas. We have invited Brenda Castillo of National Hispanic Media Coalition, Steven Renderos of Media Justice, Jacquelyn Mason from the Disinformation Defense League and Stephanie Valencia from Equis Labs. I'll be moderating. We may make additional invitations based on the response to this first round of outreach.

Sent from my iPhone

On Oct 18, 2021, at 5:37 PM, Greer, Kristin <kgreer@ftc.gov> wrote:

Dear Jessica,

Thank you for reaching out with this invitation for Commissioner Slaughter to participate in the upcoming roundtable discussion. Are you able to share who else might be in attendance on November 3rd?

All the best,
KG

Kristin N. Greer
Office of Commissioner Rebecca Kelly Slaughter
Federal Trade Commission
kgreer@ftc.gov
202-326-3228 (O) (b)(6) (C)

From: Jessica González <(b)(6)@freepress.net>
Sent: Monday, October 18, 2021 8:27 PM
To: Laroia, Gaurav <glaroia@ftc.gov>; Greer, Kristin <kgreer@ftc.gov>; Rose Lang-Maso <(b)(6)@freepress.net>
Subject: Speaking invitation for roundtable discussion w/ Senator Luján & Free Press Action

Dear Gaurav and Kristin,

As you know, disinformation in non-English languages on social media platforms like Facebook, YouTube and Twitter about elections, the pandemic, vaccines, climate change and other crucial issues is rampant. This has critical implications for everything from public health to our democratic institutions.

Free Press Action and The Office of Senator Luján would like to invite Commissioner Slaughter to provide five minutes of closing remarks at an invite-only roundtable discussion on Wednesday, November 3rd, at 3pm ET over Zoom. This on-the-record discussion will include Members of Congress, policy experts, grassroots leaders of color, and others. This event will be open to selected members of the press and Hill staff to shine light on this issue and invite a robust discussion about potential policy solutions.

Alongside distinguished members of Congress, we will invite a number of racial justice leaders and policy experts to share about the harms of online disinformation across languages as well as potential solutions. One topic that we expect advocates will be keen to discuss, is what the FTC can do to rein in Big Tech. We'd love to hear from Commissioner Slaughter about this.

Please RSVP this week and we can follow up with further details.

Best,
Jessica

--
Jessica J. González (she/her)
Co-CEO
Free Press & Free Press Action Fund
www.freepress.net
c: (b)(6)

Fight for your rights to connect and communicate

This email has been scanned by the OptfinITy Email Security System for viruses and other malware. While this message itself should not contain any malware, it is possible this message may contain phishing or other content which is intended to trick you. Please use caution.
https://optfinity.emailservice.io/

--
Jessica J. González (she/her)
Co-CEO
Free Press & Free Press Action Fund
www.freepress.net
c: (b)(6)

Fight for your rights to connect and communicate

--
Jessica J. González (she/her)
Co-CEO
Free Press & Free Press Action Fund
www.freepress.net
c: (b)(6)

Fight for your rights to connect and communicate

This email has been scanned by the OptfinITy Email Security System for viruses and other malware. While this message itself should not contain any malware, it is possible this message may contain phishing or other content which is intended to trick you. Please use caution.
https://optfinity.emailservice.io/

--
Jessica J. González (she/her)
Co-CEO
Free Press & Free Press Action Fund
www.freepress.net
c: (b)(6)

Fight for your rights to connect and communicate

From: Bumpus, Jeanne
Sent: Wed, 19 Apr 2023 18:26:19 +0000
To: Khan, Lina; Slaughter, Rebecca; Bedoya, Alvaro
Cc: Wilkins, Elizabeth; Laroia, Gaurav; Estrada, Danielle; Moriarty, Kevin; Vandecar, Kim; Runco, Philip; Crawford, Molly; Farrar, Douglas; Miller, Sarah; Zhao, Daniel; Hann, Carolyn L.; Levine, Samuel; Signs, Kelly; Rebich, David; Robbins, David; Dasgupta, Anisha
Subject: Unofficial transcript
Attachments: House E&C - FTC Budget Hearing - 4.18.23.docx

Good Afternoon,

An unofficial transcript of yesterday's hearing is attached.

Jeanne

From: Holland, Caroline
Sent: Sat, 15 Aug 2020 14:28:45 +0000
To: Slaughter, Rebecca
Cc: Mark, Synda; Batal, Mohamad; Goldstein, Elena; King, Austin; Kopec, Janice; Greer, Kristin
Subject: Weekly wrap August 10-14
Attachments: (b)(5)

(b)(5)

Hi Becca,
Hope you had a good week! Here's everything you'll want to know about the BC side of the house.
Enjoy the weekend,
Caroline

(b)(5)

FOR PUBLICATION

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

FEDERAL TRADE COMMISSION, *Plaintiff-Appellee*, v. QUALCOMM INCORPORATED, A Delaware corporation, *Defendant-Appellant*, SAMSUNG ELECTRONICS COMPANY, LTD.; SAMSUNG SEMICONDUCTOR INC.; INTEL CORPORATION; ERICSSON, INC.; SAMSUNG ELECTRONICS AMERICA, INC.; MEDIATEK INC.; APPLE INC., *Intervenors*, NOKIA TECHNOLOGIES OY; INTERDIGITAL, INC.; LENOVO (UNITED STATES), INC.; MOTOROLA MOBILITY LLC, *Intervenors*.	No. 19-16122 D.C. No. 5:17-cv-00220-LHK OPINION

Appeal from the United States District Court
for the Northern District of California
Lucy H. Koh, District Judge, Presiding

Argued and Submitted February 13, 2020
San Francisco, California

Filed August 11, 2020

Before: Johnnie B. Rawlinson and Consuelo M. Callahan, Circuit Judges, and Stephen J. Murphy, III,[*] District Judge.

Opinion by Judge Callahan

SUMMARY[**]

Antitrust

The panel vacated the district court's judgment, and reversed the district court's permanent, worldwide injunction prohibiting several of Qualcomm Incorporated's core business practices.

The Federal Trade Commission ("FTC") contended that Qualcomm violated the Sherman Act, 15 U.S.C. §§ 1, 2, by unreasonably restraining trade in, and unlawfully monopolizing, the code division multiple access ("CDMA") and premium long-term evolution ("LTE") cellular modern chip markets.

[*] The Honorable Stephen J. Murphy, III, United States District Judge for the Eastern District of Michigan, sitting by designation.

[**] This summary constitutes no part of the opinion of the court. It has been prepared by court staff for the convenience of the reader.

Qualcomm has made significant contributions to the technological innovations underlying modern cellular systems, including CDMA and LTE cellular standards. Qualcomm protects and profits from its innovations through patents, which it licenses to original equipment manufacturers ("OEM"). Qualcomm's patents include cellular standard essential patents ("SEPs"), non-cellular SEPS, and non-SEPs. Because SEP holders could prevent industry participants from implementing a standard by selectively refusing to license, international standard-setting organizations require patent holders to commit to license their SEPs on fair, reasonable, and nondiscriminatory ("FRAND") terms before their patents are incorporated into standards.

The panel framed the issues to focus on the impact, if any, of Qualcomm's practices in the area of effective competition: the markets for CDMA and premium LTE modern chips.

The panel began by examining the district court's conclusion that Qualcomm had an antitrust duty to license its SEPs to its direct competitors in the modern chip markets pursuant to the exception outlined in *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985). The panel held that none of the required elements for the *Aspen Skiing* exception were present, and the district court erred in holding that Qualcomm was under an antitrust duty to license rival chip manufacturers. The panel held that Qualcomm's OEM-level licensing policy, however novel, was not an anticompetitive violation of the Sherman Act.

The panel rejected the FTC's contention that even though Qualcomm was not subject to an antitrust duty to deal under *Aspen Skiing*, Qualcomm nevertheless engaged in anticompetitive conduct in violation of § 2 of the Sherman

Act. The panel held that the FTC did not satisfactorily explain how Qualcomm's alleged breach of its contractual commitment *itself* impaired the opportunities of rivals. Because the FTC did not meet its initial burden under the rule of reason framework, the panel was less critical of Qualcomm's procompetitive justifications for its OEM-level licensing policy—which, in any case, appeared to be reasonable and consistent with current industry practice. The panel concluded that to the extent Qualcomm breached any of its FRAND commitments, the remedy for such a breach was in contract or tort law.

The panel next addressed the district court's primary theory of anticompetitive harm: Qualcomm's imposition of an "anticompetitive surcharge" on rival chip suppliers via its licensing royalty rates. The panel held that Qualcomm's patent-licensing royalties and "no license, no chips" policy did not impose an anticompetitive surcharge on rivals' modem chip sales. Instead, these aspects of Qualcomm's business model were "chip-supplier neutral" and did not undermine competition in the relevant markers. The panel held further that Qualcomm's 2011 and 2013 agreements with Apple have not had the actual or practical effect of substantially foreclosing competition in the CDMA modem chip market. Also, because these agreements were terminated years ago by Apple itself, there was nothing to be enjoined.

COUNSEL

Thomas C. Goldstein (argued), Kevin K. Russell, and Eric F. Citron, Goldstein & Russell P.C., Bethesda, Maryland; Gary A. Bornstein, Antony L. Ryan, Yonatan Even, and M. Brent Byars, Cravath Swaine & Moore LLP, New York, New York; Robert A. Van Nest, Eugene M. Paige, Cody S. Harris, and Justina Sessions, Keker Van Nest & Peters LLP, San Francisco, California; Willard K. Tom, Morgan Lewis & Bockius LLP, Washington, D.C.; Geoffrey T. Holtz, Morgan Lewis & Bockius LLP, San Francisco, California; Richard S. Taffet, Morgan Lewis & Bockius LLP, New York, New York; Michael W. McConnell, Wilson Sonsini Goodrich & Rosati, Palo Alto, California; for Defendant-Appellant.

Brian H. Fletcher (argued), Special Counsel; Michele Arington, Assistant General Counsel; Heather Hippsley, Deputy General Counsel; Ian R. Conner, Deputy Director; Daniel Francis, Associate Director; Jennifer Milici, Chief Trial Counsel; Alexander Ansaldo, Joseph Baker, Wesley Carson, Geoffrey Green, Rajesh James, Kenneth Merber, and Mark Woodward, Attorneys, Bureau of Competition; Federal Trade Commission, Washington, D.C.; for Plaintiff-Appellee.

Michael F. Murray (argued), Deputy Assistant Attorney General; William J. Rinner, Chief of Staff and Senior Counsel; Daniel E. Haar, Acting Chief, Competition Policy and Advocacy Section; Jennifer Dixton, Patrick M. Kuhlmann, and Jeffrey D. Negrette, Attorneys; Antitrust Division, United States Department of Justice, Washington, D.C.; for Amicus Curiae United States.

Jonathan S. Massey, Matthew M. Collette, and Kathryn Robinette, Massey & Gail LLP, Washington, D.C., for Amicus Curiae Ericsson, Inc.

Amanda Tessar, Perkins Coie LLP, Denver, Colorado; Sarah E. Fowler, Perkins Coie LLP, Palo Alto, California; for Amicus Curiae Act | The App Association.

Henry C. Su, Ankur Kapoor and David Golden, Constantine Cannon LLP, Washington, D.C., for Amicus Curiae High Tech Inventors Alliance.

Steven C. Holtzman and Gabriel R. Schlabach, Boies Schiller Flexner LLP, San Francisco, California, for Amicus Curiae MediaTek Inc.

John J. Vecchione, Michael Pepson, and Jessica Thompson, Cause of Action Institute, Washington, D.C., for Amicus Curiae Cause of Action Institute.

Garrard R. Beeney and Akash M. Toprani, Sullivan & Cromwell LLP, New York, New York, for Amicus Curiae Dolby Laboratories, Inc.

Erik S. Jaffe, Schaerr Jaffe LLP, Washington, D.C., for Amici Curiae Antitrust and Patent Law Professors, Economists, and Scholars.

Matthew J. Dowd, Dowd Scheffel PLLC, Washington, D.C., for Amicus Curiae The Honorable Paul R. Michel (Ret.).

Andrew G. Isztwan, InterDigital Inc., Wilmington, Delaware, for Amicus Curiae InterDigital Inc.

Robert P. Taylor, RPT Legal Strategies PC, San Francisco, California, for Amicus Curiae Alliance of U.S. Startups & Inventors for Jobs (USIJ).

Jarod M. Bona, Aaron R. Gott, Luis Blanquez, and Luke Hasskamp, Bona Law PC, La Jolla, California; Alexander Shear, Bona Law PC, New York, New York; for Amici Curiae International Center for Law & Economics and Scholars of Law and Economics.

Ryan W. Koppelman, Alston & Bird LLP, Palo Alto, California, for Amicus Curiae Nokia Technologies Oy.

David W. Kesselman, Amy T. Brantly, and Monica M. Castillo Van Panhuys, Kesselman Brantly Stockinger, Manhattan Beach, California, for Amicus Curiae Professor Jorge L. Contreras.

Sandeep Vaheesan, Open Markets Institute, Washington, D.C., for Amicus Curiae Open Markets Institute.

Thomas G. Hungar and Nick Harper, Gibson Dunn & Crutcher LLP, Washington, D.C.; Joshua Landau, Computer & Communications Industry Association, Washington, D.C.; for Amicus Curiae Computer and Communications Industry Association.

Michael D. Hausfeld and Scott Martin, Hausfeld LLP, New York, New York; Ian Simmons, Benjamin J. Henricks, Brian P. Quinn, and Scott Schaeffer, O'Melveny & Myers LLP, Washington, D.C.; for Amici Curiae Law and Economics Scholars.

Charles Duan, R Street Institute, Washington, D.C., for Amicus Curiae R Street Institute.

Gregory P. Stone, Benjamin J. Horwich, Justin P. Raphael, and Stephanie G. Herrera, Munger Tolles & Olson LLP, San Francisco, California; Donald B. Verrilli Jr., Munger Tolles & Olson LLP, Washington, D.C.; for Amicus Curiae Intel Corporation.

Andrew J. Pincus, Mayer Brown LLP, Washington, D.C., for Amici Curiae Association of Global Automakers and Alliance of Automobile Manufacturers.

John ("Jay") Jurata Jr., Randall C. Smith, Thomas King-Sun Fu, and Emily Luken, Orrick Herrington & Sutcliffe LLP, Washington, D.C., for Amici Curiae Continental Automotive Systems Inc., and Denso Corporation.

Jean-Claude André and David R. Carpenter, Sidley Austin LLP, Los Angeles, California; Raymond A. Atkins and Joseph V. Coniglio, Sidley Austin LLP, Washington, D.C.; for Amicus Curiae Timothy J. Muris.

Randy M. Stutz, American Antitrust Institute, Washington, D.C., for Amici Curiae American Antitrust Institute and Public Knowledge.

David H. Herrington, and Alexandra K. Theobald, Cleary Gottlieb Steen & Hamilton LLP, New York, New York; Daniel P. Culley and Jessica A. Hollis, Cleary Gottlieb Steen & Hamilton LLP, Washington, D.C.; for Amicus Curiae Fair Standards Alliance.

OPINION

CALLAHAN, Circuit Judge:

This case asks us to draw the line between *anti*competitive behavior, which is illegal under federal antitrust law, and *hyper*competitive behavior, which is not. The Federal Trade Commission ("FTC") contends that Qualcomm Incorporated ("Qualcomm") violated the Sherman Act, 15 U.S.C. §§ 1, 2, by unreasonably restraining trade in, and unlawfully monopolizing, the code division multiple access ("CDMA") and premium long-term evolution ("LTE") cellular modem chip markets. After a ten-day bench trial, the district court agreed and ordered a permanent, worldwide injunction prohibiting several of Qualcomm's core business practices. We granted Qualcomm's request for a stay of the district court's injunction pending appeal. *FTC v. Qualcomm Inc.*, 935 F.3d 752 (9th Cir. 2019). At that time, we characterized the district court's order and injunction as either "a trailblazing application of the antitrust laws" or "an improper excursion beyond the outer limits of the Sherman Act." *Id.* at 757. We now hold that the district court went beyond the scope of the Sherman Act, and we reverse.

I

A

Founded in 1985, Qualcomm dubs itself "the world's leading cellular technology company." Over the past several decades, the company has made significant contributions to the technological innovations underlying modern cellular systems, including third-generation ("3G") CDMA and fourth-generation ("4G") LTE cellular standards—the standards practiced in most modern cellphones and

"smartphones." Qualcomm protects and profits from its technological innovations through its patents, which it licenses to original equipment manufacturers ("OEMs") whose products (usually cellphones, but also smart cars and other products with cellular applications) practice one or more of Qualcomm's patented technologies.

Qualcomm's patents include cellular standard essential patents ("SEPs"), non-cellular SEPs, and non-SEPs. Cellular SEPs are patents on technologies that international standard-setting organizations ("SSOs") choose to include in technical standards practiced by each new generation of cellular technology. SSOs—also referred to as standards development organizations ("SDOs")—are global collaborations of industry participants that "establish technical specifications to ensure that products from different manufacturers are compatible with each other." *Microsoft Corp. v. Motorola, Inc.*, 696 F.3d 872, 875 (9th Cir. 2012) ("*Microsoft II*") (citing Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 Calif. L. Rev. 1889 (2002)). Cellular SEPs are necessary to practice a particular cellular standard. Because SEP holders could prevent industry participants from implementing a standard by selectively refusing to license, SSOs require patent holders to commit to license their SEPs on fair, reasonable, and nondiscriminatory ("FRAND") terms before their patents are incorporated into standards.[1]

[1] *See generally* Joshua D. Wright, *SSOs, FRAND, and Antitrust: Lessons from the Economics of Incomplete Contracts*, 21 GEO. MASON L. REV. 791 (2014) (discussing the role of SSOs in the selection and enforcement of standards and whether antitrust law has, or should have, a role in regulating the SSO contracting processes).

Some of Qualcomm's SEPs and other patents relate to CDMA and premium LTE technologies—that is, the way cellular devices communicate with the 3G and 4G cellular networks—while others relate to other cellular and non-cellular applications and technologies, such as multimedia, cameras, location detecting, user interfaces, and more. Rather than license its patents individually, Qualcomm generally offers its customers various "patent portfolio" options, whereby the customer/licensee pays for and receives the right to practice all three types of Qualcomm patents (SEPs, non-cellular SEPs, and non-SEPs).

Qualcomm's patent licensing business is very profitable, representing around two-thirds of the company's value. But Qualcomm is no one-trick pony. The company also manufactures and sells cellular modem chips, the hardware that enables cellular devices to practice CDMA and premium LTE technologies and thereby communicate with each other across cellular networks.[2] This makes Qualcomm somewhat unique in the broader cellular services industry. Companies such as Nokia, Ericsson, and Interdigital have comparable SEP portfolios but do not compete with Qualcomm in the modem chip markets. On the other hand, Qualcomm's main competitors in the modem chip markets—companies such as MediaTek, HiSilicon, Samsung LSI, ST-Ericsson, and VIA

[2] Qualcomm's licensing and modem chip businesses are run out of two different divisions: (1) Qualcomm Technology Licensing, which is responsible for granting licenses to Qualcomm's patent portfolios and determining what royalty rates to charge for those licenses; and (2) Qualcomm CDMA Technologies, which is responsible for manufacturing, pricing, and selling Qualcomm's CDMA and premium LTE modem chips. *Id.* at 669–75.

Telecom (purchased by Intel in 2015)—do not hold or have not held comparable SEP portfolios.[3]

Like its licensing business, Qualcomm's modem chip business has been very successful. From 2006 to 2016, Qualcomm possessed monopoly power in the CDMA modem chip market, including over 90% of market share. From 2011 to 2016, Qualcomm possessed monopoly power in the premium LTE modem chip market, including at least 70% of market share. During these timeframes, Qualcomm leveraged its monopoly power to "charge monopoly prices on [its] modem chips." *Qualcomm*, 411 F. Supp. 3d at 800. Around 2015, however, Qualcomm's dominant position in the modem chip markets began to recede, as competitors like Intel and MediaTek found ways to successfully compete. Based on projections from 2017 to 2018, Qualcomm maintains approximately a 79% share of the CDMA modem chip market and a 64% share of the premium LTE modem chip market.[4]

B

Qualcomm licenses its patent portfolios exclusively at the OEM level, setting the royalty rates on its CDMA and LTE patent portfolios as a percentage of the end-product

[3] The now-defunct modem chip supplier ST-Ericsson presents the only partial exception to this general pattern. ST-Ericsson was a joint venture between Ericsson, which *does* have a large SEP portfolio, and STMicroelectronics. The company was dissolved in 2013. *See TCL Commc'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, No. CV 15-2370 JVS(DFMx), 2018 WL 4488286, at *44 (C.D. Cal. Sept. 14, 2018), *rev'd in part, vacated in part*, 943 F.3d 1360 (Fed. Cir. 2019).

[4] According to Qualcomm, its market share in premium LTE modem chips dropped below 50% in 2017. Appellant's Opening Br. at 118.

sales price. This practice is not unique to Qualcomm. As the district court found, "[f]ollowing Qualcomm's lead, other SEP licensors like Nokia and Ericsson have concluded that licensing only OEMs is more lucrative, and structured their practices accordingly."[5] *Id.* at 754–55. OEM-level licensing allows these companies to obtain the maximum value for their patented technologies while avoiding the problem of patent exhaustion, whereby "the initial authorized [or licensed] sale of a patented item terminates all patent rights to that item." *Quanta Comput., Inc. v. LG Elecs., Inc.*, 553 U.S. 617, 625 (2008); *see also Adams v. Burke*, 84 U.S. 453, 457 (1873) (when a patented item is "once lawfully made and sold, there is no restriction on [its] *use* to be implied for the benefit of the patentee or his assignees or licensees"). Due to patent exhaustion, if Qualcomm licensed its SEPs further "upstream" in the manufacturing process to competing chip suppliers, then its patent rights would be exhausted when these rivals sold their products to OEMs. OEMs would then have little incentive to pay Qualcomm for patent licenses, as they could instead

[5] According to Nokia and other companies, OEM-level licensing is now the industry norm. *See* Br. of Amicus Curiae Nokia Technologies Oy at 4 ("Requiring component-level licensing contravenes industry norms, leads to the ATIS and TIA IPR Policies being inconsistent with [other SSO policies], and could have unintended consequences for other SEP holders and the industry at large."); Br. of Amicus Curiae Dolby Laboratories, Inc. at 16 ("The consistent experience of Dolby, a licensor to thousands of licenses under SEPs, is that FRAND licensing of SEPs takes place at the end-product level."); *see also* Br. of Amici Curiae Continental Automotive Systems, Inc. and Denso Corporation at 1–2 ("[J]ust as in the smartphone industry, many cellular SEP-holders restrict their licensing in the automotive industry solely to the manufacturers of consumer goods (here, the Big Three and other automakers), meaning that upstream manufacturers like amici are left out in the cold.").

become "downstream" recipients of the already exhausted patents embodied in these rivals' products.[6]

Because rival chip manufacturers practice many of Qualcomm's SEPs by necessity, Qualcomm offers these companies what it terms "CDMA ASIC Agreements," wherein Qualcomm promises not to assert its patents in exchange for the company promising not to sell its chips to unlicensed OEMs.[7] These agreements, which essentially function as patent-infringement indemnifications, include reporting requirements that allow Qualcomm to know the details of its rivals' chip supply agreements with various OEMs. But they also allow Qualcomm's competitors to practice Qualcomm's SEPs royalty-free.

Qualcomm reinforces these practices with its so-called "no license, no chips" policy, under which Qualcomm

---

[6] The terms "upstream" and "downstream" refer to the manufacturing chain for consumer products such as cellphones that contain component parts produced by different companies that are sequentially installed until the end-product takes shape, at which point it is sold by an OEM (the most "downstream" manufacturer in the chain) directly to consumers. *See MEMC Elec. Materials, Inc. v. Mitsubishi Materials Silicon Corp.*, 420 F.3d 1369, 1372, 1374 (Fed. Cir. 2005) (describing the upstream and downstream manufacturing process in the context of silicon wafers used in semiconductors).

[7] *See Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1209 (Fed. Cir. 2014) ("Because the standard *requires* that devices utilize specific technology, compliant devices *necessarily* infringe certain claims in patents that cover technology incorporated into the standard."). Previously, in the 1990s, Qualcomm provided "non-exhaustive licenses" to rival chip suppliers, charging a royalty rate on their chipset sales. *Qualcomm*, 411 F. Supp. 3d at 673, 754. According to Qualcomm, these were actually "non-exhaustive, royalty-bearing agreements with chipmakers that explicitly did not grant rights to the chipmaker's [OEM] customers." Appellant's Opening Br. at 45.

refuses to sell modem chips to OEMs that do not take licenses to practice Qualcomm's SEPs. Otherwise, because of patent exhaustion, OEMs could decline to take licenses, arguing instead that their purchase of chips from Qualcomm extinguished Qualcomm's patent rights with respect to any CDMA or premium LTE technologies embodied in the chips. This would not only prevent Qualcomm from obtaining the maximum value for its patents, it would result in OEMs having to pay more money (in licensing royalties) to purchase and use a competitor's chips, which are unlicensed. Instead, Qualcomm's practices, taken together, are "chip supplier neutral"—that is, OEMs are required to pay a per-unit licensing royalty to Qualcomm for its patent portfolios regardless of which company they choose to source their chips from.

Although Qualcomm's licensing and modem chip businesses have made it a major player in the broader cellular technology market, the company is not an OEM. That is, Qualcomm does not manufacture and sell cellphones and other end-use products (like smart cars) that consumers purchase and use. Thus, it does not "compete"—in the antitrust sense—against OEMs like Apple and Samsung in these product markets. Instead, these OEMs are Qualcomm's *customers*.[8]

[8] Samsung presents the one exception to this rule, as it is both one of Qualcomm's OEM customers and one of its competitors in the modem chip markets (Samsung LSI is Samsung's modem chip division). 411 F. Supp. 3d at 746, 750. However, as Samsung LSI does not sell chips externally, "Samsung is not a competitor [of Qualcomm] to sell modem chips to external OEMs." *Id.* at 750.

C

Over the past several decades, as Qualcomm's licensing and modem chip businesses thrived and the company gained more and more market share, its OEM customers and rival chipmakers grew frustrated with the company's business practices. The targets of these complaints included Qualcomm's practice of licensing exclusively at the OEM level and refusing to license rival chipmakers, its licensing royalty rates, its "no license, no chips" policy, and Qualcomm's sometimes aggressive defense of these policies and practices. Qualcomm's customers occasionally attempted to "discipline" its pricing through arbitration claims, negotiations, threatening to change chip suppliers, and litigation. These maneuvers generally resulted in settlements and renegotiated licensing and chip-supply agreements with Qualcomm, even as OEMs continued to look elsewhere for less expensive modem chip options.

Qualcomm's competitors in the modem chip markets contend that Qualcomm's business practices, in particular its refusal to license them, have hampered or slowed their ability to develop and retain OEM customer bases, limited their growth, delayed or prevented their entry into the market, and in some cases forced them out of the market entirely. These competitors contend that this result is not just anticompetitive, but a violation of Qualcomm's contractual commitments to two cellular SSOs—the Telecommunications Industry Association ("TIA") and Alliance for Telecommunications Industry Solutions ("ATIS")—to license its SEPs "to all applicants" on FRAND terms.[9] Qualcomm argues that it has no antitrust duty to deal

[9] Under the TIA contract, Qualcomm agreed to make its SEPs "available to all applicants under terms and conditions that are

with its rivals, and in any case OEM-level licensing is consistent with Qualcomm's SSO commitments because only OEM products (*i.e.*, cellphones, tablets, etc.) "practice" or "implement" the standards embodied in Qualcomm's SEPs. Furthermore, Qualcomm argues that it substantially complies with the TIA and ATIS requirements by not asserting its patents against rival chipmakers.

In 2011 and 2013, Qualcomm signed agreements with Apple under which Qualcomm offered Apple billions of dollars in incentive payments contingent on Apple sourcing its iPhone modem chips exclusively from Qualcomm and committing to purchase certain quantities of chips each year. Again, rivals such as Intel—as well as Apple itself, which was interested in using Intel as an alternative chip supplier—complained that Qualcomm was engaging in anticompetitive business practices designed to maintain its monopolies in the CDMA and premium LTE modem chip markets while making it impossible for rivals to compete.[10] In 2014, Apple

---

reasonable and non-discriminatory . . . and only to the extent necessary for the practice of any or all of the Normative portions for the field of use of practice of the Standard." *FTC v. Qualcomm Inc.*, No. 17-CV-00220-LHK, 2018 WL 5848999, at *3 (N.D. Cal. Nov. 6, 2018). Under the ATIS contract, Qualcomm committed to making its SEPs "available to applicants desiring to utilize the license for the purpose of implementing the standard . . . under reasonable terms and conditions that are demonstrably free of any unfair discrimination." *Id.*

[10] Under the 2013 agreement, Qualcomm paid Apple a "marketing fund" (effectively a price rebate on chips) of $2.50 per iPhone sold with a Qualcomm chip and $1.50 per iPad sold with a Qualcomm chip, plus hundreds of millions of dollars in "incentive funds" contingent on Apple purchasing at least 100 million Qualcomm chips in 2015 and 2016. 411 F. Supp. 3d at 732. The agreement contained a "clawback provision" providing that if Apple sold devices without Qualcomm chips, then it would have to reimburse Qualcomm all or a large

decided to terminate these agreements and source its modem chips from Intel for its 2016 model iPhone.

D

In January 2017, the FTC sued Qualcomm for equitable relief, alleging that Qualcomm's interrelated policies and practices excluded competitors and harmed competition in the modem chip markets, in violation § 5(a) of the FTC Act, 15 U.S.C. § 45(a), and §§ 1 and 2 of the Sherman Act, 15 U.S.C. §§ 1, 2. After a ten-day bench trial, the district court concluded that "Qualcomm's licensing practices are an unreasonable restraint of trade under § 1 of the Sherman Act and exclusionary conduct under § 2 of the Sherman Act."[11] *Qualcomm*, 411 F. Supp. 3d at 812 (citing *United States v. Microsoft Corp.*, 253 F.3d 34, 58–59 (D.C. Cir. 2001)). The district court ordered a permanent, worldwide injunction prohibiting Qualcomm's core business practices. *Id.* at 820–24.

The district court's decision consists of essentially five mixed findings of fact and law: (1) Qualcomm's "no license, no chips" policy amounts to "anticompetitive conduct against OEMs" and an "anticompetitive practice[] in patent license negotiations"; (2) Qualcomm's refusal to license rival chipmakers violates both its FRAND commitments and

---

percentage of the per-unit marketing funds, as well as the incentive funds. *Id.*

[11] Because the district court concluded that Qualcomm violated the Sherman Act and thereby violated the FTC Act—which prohibits "[u]nfair methods of competition," including Sherman Act violations—it did not address whether Qualcomm's conduct constituted a standalone violation of the FTC Act. *Id.* at 683.

an antitrust duty to deal under § 2 of the Sherman Act;[12] (3) Qualcomm's "exclusive deals" with Apple "foreclosed a 'substantial share' of the modem chip market" in violation of both Sherman Act provisions; (4) Qualcomm's royalty rates are "unreasonably high" because they are improperly based on its market share and handset price instead of the value of its patents; and (5) Qualcomm's royalties, in conjunction with its "no license, no chips" policy, "impose an artificial and anticompetitive surcharge" on its rivals' sales, "increas[ing] the effective price of rivals' modem chips" and resulting in anticompetitive exclusivity. *Qualcomm*, 411 F. Supp. 3d at 697–98, 751–62, 766, 771–92 (citations omitted). "Collectively," the district court found, these policies and practices "create insurmountable and artificial barriers for Qualcomm's rivals, and thus do not further competition on the merits." *Id.* at 797.

The district court concluded that "[b]y attacking all facets of rivals' businesses and preventing competition on the merits, [Qualcomm's] practices 'harm the competitive process and thereby harm consumers.'" *Id.* (quoting

[12] The district court granted the FTC's pretrial motion for partial summary judgment on the issue of whether Qualcomm's SSO commitments contractually require it to license its SEPs on FRAND terms to competing modem chip suppliers. 2018 WL 5848999, at *1, 15. The district court concluded that "Ninth Circuit precedent establishes that Qualcomm's FRAND commitments include an obligation to license to all comers, including competing modem chip suppliers." *Id.* at *10 (citing *Microsoft II*, 696 F.3d at 876 (noting that "[m]any SSOs try to mitigate the threat of patent holdup by requiring members who hold IP rights in standard-essential patents to agree to license those patents to all comers on terms that are 'reasonable and nondiscriminatory,' or 'RAND.'" (quoting Lemley, *supra*, at 1902, 1906)); *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1031 (9th Cir. 2015) ("*Microsoft III*") ("[An] SEP holder cannot refuse a license to a manufacturer who commits to paying the RAND rate.")).

Microsoft, 253 F.3d at 58). Accordingly, the district court held that the FTC met its burden under the Sherman Act of proving "market power plus some evidence that the challenged restraint harms competition." *Id.* at 804 (quoting *Ohio v. Am. Express Co.*, 138 S. Ct. 2274, 2284 (2018)). Furthermore, the district court held that it could "infer" a causal connection between Qualcomm's conduct and anticompetitive harm because that conduct "'reasonably appear[s] capable of making a significant contribution to . . . maintaining monopoly power.'" *Id.* at 804–05 (alterations in original) (quoting *Microsoft*, 253 F.3d at 79).

Qualcomm timely appealed. It asks us to reverse the district court's Sherman Act ruling, vacate the district court's injunction and summary judgment ruling on Qualcomm's SSO commitments, and remand the latter for trial. For the reasons that follow, we reverse the district court's Sherman Act ruling and its issuance of a worldwide injunction. Because our reversal does not depend on the district court's grant of partial summary judgment with respect to Qualcomm's contractual commitments to license its SEPs to rival chip suppliers, we vacate that order as moot without reaching its merits.[13]

[13] *See supra* note 12. Although the FTC discussed Qualcomm's FRAND commitments in its complaint and argued that "Qualcomm's refusal to license competing manufacturers of baseband processors, in contravention of its FRAND commitments, contributes to its ability to tax its competitors' sales and maintain its monopoly," the complaint itself only alleged antitrust violations and requested equitable relief "necessary to redress and prevent recurrence of Qualcomm's violations of" the FTC Act and Sherman Act.

II

Antitrust law, like patent law, is "aimed at encouraging innovation, industry and competition." *Atari Games Corp. v. Nintendo of Am., Inc.*, 897 F.2d 1572, 1576 (Fed. Cir. 1990) (citing *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 876–77 (Fed. Cir. 1985)). "Despite the opportunities for conflict . . . a central goal of both patent and antitrust law is the promotion of the public benefit through a competitive economy." *Int'l Wood Processors v. Power Dry, Inc.*, 792 F.2d 416, 427 (4th Cir. 1986); *see also Am. Express*, 138 S. Ct. at 2290 ("[I]t is '[t]he promotion of interbrand competition,' after all, that 'is . . . the primary purpose of the antitrust laws.'" (some alterations in original) (quoting *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877, 890 (2007))). Indeed, the Federal Circuit, which frequently examines cases at the intersection of patent and antitrust law, has commented that "[t]he patent and antitrust laws are complementary, the patent system serving to encourage invention and the bringing of new products to market by adjusting investment-based risk, and the antitrust laws serving to foster industrial competition." *Intergraph Corp. v. Intel Corp.*, 195 F.3d 1346, 1362 (Fed. Cir. 1999) (citing *Loctite Corp.*, 781 F.2d at 866–67).

Among the antitrust laws, the Sherman Act, 15 U.S.C. §§ 1, 2, is particularly "important to the preservation of economic freedom and our free-enterprise system." *United States v. Topco Assocs., Inc.*, 405 U.S. 596, 610 (1972). Enacted in 1890, when the emergence of trusts and monopolies with the power to suppress competition and completely control markets had become a matter of great public concern,

> [t]he Sherman Act was designed to be a comprehensive charter of economic liberty

> aimed at preserving free and unfettered competition as the rule of trade. It rests on the premise that the unrestrained interaction of competitive forces will yield the best allocation of our economic resources, the lowest prices, the highest quality and the greatest material progress, while at the same time providing an environment conducive to the preservation of our democratic political and social institutions.

N. Pac. Ry. Co. v. United States, 356 U.S. 1, 4 (1958). In pursuit of these goals, the Sherman Act protects "the freedom guaranteed each and every business . . . to compete—to assert with vigor, imagination, devotion, and ingenuity whatever economic muscle it can muster." *Topco Assocs.*, 405 U.S. at 610.

A

Section 1 of the Sherman Act prohibits "[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States." 15 U.S.C. § 1. The Supreme Court "has long recognized that, '[i]n view of the common law and the law in this country' when the Sherman Act was passed, the phrase 'restraint of trade' is best read to mean 'undue restraint.'" *Am. Express*, 138 S. Ct. at 2283 (alteration in original) (quoting *Standard Oil Co. of N.J. v. United States*, 221 U.S. 1, 59–60 (1911)); *see also State Oil Co. v. Khan*, 522 U.S. 3, 10 (1997) (noting that § 1 of the Sherman Act is understood "to outlaw only *unreasonable* restraints") (emphasis added) (citation omitted). Thus, "[t]o establish liability under § 1, a plaintiff must prove (1) the existence of an agreement, and (2) that the agreement was in *unreasonable* restraint of

trade." *Aerotec Int'l, Inc. v. Honeywell Int'l, Inc.*, 836 F.3d 1171, 1178 (9th Cir. 2016) (emphasis added) (citing *Am. Needle, Inc. v. Nat'l Football League*, 560 U.S. 183, 189–90 (2010)).

"Restraints that are not unreasonable *per se* are judged under the 'rule of reason.'" *Am. Express*, 138 S. Ct. at 2283 (quoting *Business Elecs. Corp. v. Sharp Elecs. Corp.*, 485 U.S. 717, 723 (1988)). "The rule of reason requires courts to conduct a fact-specific assessment of 'market power and market structure . . . to assess the [restraint]'s *actual* effect' on competition." *Id.* (alterations in original) (emphasis added) (quoting *Copperweld Corp. v. Indep. Tube Corp.*, 467 U.S. 752, 768 (1984)); *see also In re Nat'l Football League's Sunday Ticket Antitrust Litig.*, 933 F.3d 1136, 1150 (9th Cir. 2019) ("Under this rule, we examine 'the facts peculiar to the business, the history of the restraint, and the reasons why it was imposed,' to determine the effect on competition in the relevant product market." (quoting *Nat'l Soc'y of Prof'l Eng'rs v. United States*, 435 U.S. 679, 692 (1978))). "The goal is to 'distinguis[h] between restraints with anticompetitive effect that are harmful to the consumer and restraints stimulating competition that are in the consumer's best interest.'" *Am. Express*, 138 S. Ct. at 2284 (alteration in original) (quoting *Leegin Creative Leather Prods.*, 551 U.S. at 886).

In *Am. Express*, for example, the Supreme Court held that the plaintiffs failed to meet their burden to show that antisteering provisions in American Express's merchant agreements—which prohibit merchants from encouraging customers at the point of sale to use other credit cards, like Visa, with lower transaction fees—have anticompetitive effects that harm consumers. *Id.* at 2280, 2289–90. Instead, Amex's unique business model and the antisteering

provisions it relies on have *increased* competition in the credit card transaction market by forcing rivals like Visa and Mastercard to adapt and innovate, which has ultimately benefited consumers by "increas[ing] the quality and quantity of credit-card transactions." *Id.* at 2290. In other words, what appeared at first to be *anti*competitive—Amex's unique business model and its use of antisteering clauses—was actually *pro*competitive and innovative. It just took a while for the market to adjust.

A plaintiff may prove that a restraint has anticompetitive effect either "directly or indirectly." *Am. Express*, 138 S. Ct. at 2284. Direct evidence includes "'proof of actual detrimental effects [on competition],'" *id.* (alteration in original) (quoting *FTC v. Ind. Fed'n of Dentists*, 476 U.S. 447, 460 (1986)), "such as reduced output, increased prices, or decreased quality in the relevant market," *id.* (citing 1 J. Kalinowski, Antitrust Laws and Trade Regulation § 12.02[2] (2d ed. 2017); *Craftsmen Limousine, Inc. v. Ford Motor Co.*, 491 F.3d 380, 390 (8th Cir. 2007); *Virgin Atl. Airways Ltd. v. British Airways PLC*, 257 F.3d 256, 264 (2nd Cir. 2001)). Indirect evidence involves "proof of market power plus some evidence that the challenged restraint harms competition." *Id.* (citing 1 Kalinowski § 12.02[2]; *Tops Markets, Inc. v. Quality Markets, Inc.*, 142 F.3d 90, 97 (2nd Cir. 1998); *Spanish Broadcasting Sys. of Fla. v. Clear Channel Commc'ns, Inc.*, 376 F.3d 1065, 1073 (11th Cir. 2004)).

Whereas § 1 of the Sherman Act targets *concerted* anticompetitive conduct, § 2 targets *independent* anticompetitive conduct. *Am. Needle, Inc.*, 560 U.S. at 190. The statute makes it illegal to "monopolize . . . any part of the trade or commerce among the several States." 15 U.S.C. § 2. To establish liability under § 2, a plaintiff must show:

"'(a) the possession of monopoly power in the relevant market; (b) the willful acquisition or maintenance of that power; and (c) causal antitrust injury.'" *Somers v. Apple, Inc.*, 729 F.3d 953, 963 (9th Cir. 2013) (quoting *Allied Orthopedic Appliances Inc. v. Tyco Health Care Grp. LP*, 592 F.3d 991, 998 (9th Cir. 2010) ("*Allied Orthopedic*")). "The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not [itself] unlawful; [instead,] it is an important element of the free-market system." *Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004) ("*Trinko*"). "The opportunity to charge monopoly prices—at least for a short period—is what attracts 'business acumen' in the first place; it induces risk taking that produces innovation and economic growth." *Id.*

"To safeguard the incentive to innovate, the possession of monopoly power will not be found unlawful [under § 2] unless it is accompanied by an element of anticompetitive *conduct*." *Id.* Accordingly, plaintiffs are required to prove "anticompetitive abuse or leverage of monopoly power, or a predatory or exclusionary means of attempting to monopolize the relevant market." *Allied Orthopedic*, 592 F.3d at 1000 (quoting *Foremost Pro Color, Inc. v. Eastman Kodak Co.*, 703 F.2d 534, 545–46 (9th Cir. 1983)); *see also United States v. Grinnell Corp.*, 384 U.S. 563, 570–71 (1966) (distinguishing "willful acquisition" of monopoly power from "development as a consequence of a superior product, business acumen, or historic accident"). "[T]o be condemned as exclusionary, a monopolist's act must have an 'anticompetitive effect'"—that is, it "must harm the competitive *process* and thereby harm consumers." *Microsoft*, 253 F.3d at 58. "In contrast, harm to one or more *competitors* will not suffice." *Id.*; *see also Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 458 (1993) (noting that the

antitrust laws are directed "not against conduct which is competitive, even severely so, but [only] against conduct which unfairly tends to destroy competition itself").

Allegations that conduct "has the effect of reducing consumers' choices or increasing prices to consumers do[] not sufficiently allege an injury to competition . . . [because] [b]oth effects are fully consistent with a free, competitive market." *Brantley v. NBC Universal, Inc.*, 675 F.3d 1192, 1202 (9th Cir. 2012) (citations omitted); *see also Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 237 (1993) ("Where . . . output is expanding at the same time prices are increasing, rising prices are equally consistent with growing product demand."). Instead, in order to prove a violation of the Sherman Act, the plaintiff must show that diminished consumer choices and increased prices are the result of a less competitive market due to either artificial restraints or predatory and exclusionary conduct. *See Am. Express*, 138 S. Ct. at 2288 ("This Court will 'not infer competitive injury from price and output data absent some evidence that tends to prove that output was restricted or prices were above a competitive level.'" (quoting *Brooke Grp. Ltd.*, 509 U.S. at 237)).

Furthermore, novel business practices—*especially* in technology markets—should not be "conclusively presumed to be unreasonable and therefore illegal without elaborate inquiry as to the precise harm they have caused or the business excuse for their use." *Microsoft*, 253 F.3d at 91 (citing *N. Pac. Ry. Co.*, 356 U.S. at 5). "Because innovation involves new products and business practices, courts['] and economists' initial understanding of these practices will skew initial likelihoods that innovation is anticompetitive and the proper subject of antitrust scrutiny." Geoffrey A. Manne & Joshua D. Wright, *Innovation and the Limits of*

Antitrust, 6 J. Comp. L. & Econ. 153, 167 (2010); *see also* Rachel S. Tennis & Alexander Baier Schwab, *Business Model Innovation and Antitrust Law*, 29 Yale J. on Reg. 307, 319 (2012) (explaining how "antitrust economists, and in turn lawyers and judges, tend to treat novel products or business practices as anticompetitive" and "are likely to decide cases wrongly in rapidly changing dynamic markets," which can have long-lasting effects particularly in technological markets, where innovation "is essential to economic growth and social welfare" and "an erroneous decision will deny large consumer benefits").

Regardless of whether the alleged antitrust violation involves concerted anticompetitive conduct under § 1 or independent anticompetitive conduct under § 2, the three-part burden-shifting test under the rule of reason is essentially the same. *See Standard Oil Co. of N.J.*, 221 U.S. at 61–62; *Microsoft*, 253 F.3d at 58–59. Under § 1, "the plaintiff has the initial burden to prove that the challenged restraint has a substantial anticompetitive effect that harms consumers in the relevant market." *Am. Express*, 138 S. Ct. at 2284 (citing 1 Kalinowski § 12.02[1]; P. Areeda & H. Hovenkamp, Fundamentals of Antitrust Law § 15.02[B] (4th ed. 2017) (Areeda & Hovenkamp); *Capital Imaging Assoc., P.C. v. Mohawk Valley Med. Assocs., Inc.*, 996 F.2d 537, 543 (2nd Cir. 1993)). "If the plaintiff carries its burden, then the burden shifts to the defendant to show a procompetitive rationale for the restraint." *Id.* (citing 1 Kalinowski § 12.02[1]; Areeda & Hovenkamp § 15.02[B]; *Capital Imaging Assoc.*, 996 F.2d at 543). "If the defendant makes this showing, then the burden shifts back to the plaintiff to demonstrate that the procompetitive efficiencies could be reasonably achieved through less anticompetitive means." *Id.* (citing 1 Kalinowski § 12.02[1]; *Capital Imaging Assoc.*, 996 F.2d at 543).

Likewise, "if a plaintiff successfully establishes a *prima facie* case under § 2 by demonstrating anticompetitive effect, then the monopolist may proffer a 'procompetitive justification' for its conduct." *Microsoft*, 253 F.3d at 59 (citing *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 483 (1992)). "If the monopolist asserts a procompetitive justification—a nonpretextual claim that its conduct is indeed a form of competition on the merits because it involves, for example, greater efficiency or enhanced consumer appeal—then the burden shifts back to the plaintiff to rebut that claim." *Id.* If the plaintiff cannot rebut the monopolist's procompetitive justification, "then the plaintiff must demonstrate that the anticompetitive harm of the conduct outweighs the procompetitive benefit." *Id.*

The similarity of the burden-shifting tests under §§ 1 and 2 means that courts often review claims under each section simultaneously. If, in reviewing an alleged Sherman Act violation, a court finds that the conduct in question is *not* anticompetitive under § 1, the court need not separately analyze the conduct under § 2. *Williams v. I.B. Fischer Nev.*, 999 F.2d 445, 448 (9th Cir. 1993). However, although the tests are largely similar, a plaintiff may not use *indirect* evidence to prove unlawful monopoly maintenance via anticompetitive conduct under § 2. *See Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 307–08 (3d Cir. 2007) (distinguishing between proving the existence of monopoly power through indirect evidence and proving anticompetitive conduct itself, the second element of a § 2 claim). In this respect, proving an antitrust violation under § 2 of the Sherman Act is more exacting than proving a § 1 violation, although courts have also held that the third element of a § 2 claim, the causation element, may be inferred. *See Microsoft*, 253 F.3d at 79.

B

A threshold step in any antitrust case is to accurately define the relevant market, which refers to "the area of effective competition." *Am. Express*, 138 S. Ct. at 2285 (citation omitted); *see also Image Tech. Servs., Inc. v. Eastman Kodak Co.*, 125 F.3d 1195, 1202 (9th Cir. 1997) ("The relevant market is the field in which meaningful competition is said to exist." (citing *United States v. Continental Can Co.*, 378 U.S. 441, 449 (1964))). "[C]ourts usually cannot properly apply the rule of reason without an accurate definition of the relevant market." *Am. Express*, 138 S. Ct. at 2285. Otherwise, "'there is no way to measure [the defendant's] ability to lessen or destroy competition.'" *Id.* (alteration in original) (quoting *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172, 177 (1965)). Furthermore, in assessing alleged antitrust injuries, courts must focus on anticompetitive effects "in the market where competition is [allegedly] being restrained." *Am. Ad Mgmt., Inc. v. Gen. Tel. Co. of Cal.*, 190 F.3d 1051, 1057 (9th Cir. 1999). "Parties whose injuries, though flowing from that which makes the defendant's conduct unlawful, are experienced in another market do not suffer antitrust injury." *Id.*; *see Intergraph Corp.*, 195 F.3d at 1353 (noting that "[t]he prohibited conduct must be directed toward *competitors* and must be intended to injure competition" (emphasis added) (citing *Spectrum Sports*, 506 U.S. at 458)).[14]

[14] *But see Am. Ad Mgmt.*, 190 F.3d at 1057 n.5 (noting that the Supreme Court "has carved a narrow exception to the market participant requirement for parties whose injuries are 'inextricably intertwined' with the injuries of market participants" (citing *Blue Shield v. McCready*, 457 U.S. 465 (1982))).

Here, the district court correctly defined the relevant markets as "the market for CDMA modem chips and the market for premium LTE modem chips." *Qualcomm*, 411 F. Supp. 3d at 683. Nevertheless, its analysis of Qualcomm's business practices and their anticompetitive impact looked beyond these markets to the much larger market of cellular services generally. Thus, a substantial portion of the district court's ruling considered alleged economic harms to OEMs—who are Qualcomm's *customers*, not its competitors—resulting in higher prices to consumers. These harms, even if real, are not "anticompetitive" in the antitrust sense—at least not *directly*—because they do not involve restraints on trade or exclusionary conduct in "the area of effective competition." *Am. Express*, 138 S. Ct. at 2285.

The district court's consideration of anticompetitive impacts outside of the relevant markets is reflected in the way it framed and organized the issues. For example, the first, major portion of the district court's rule of reason analysis ("Anticompetitive Conduct Against OEMs and Resulting Harm") provides a detailed account of Qualcomm's "anticompetitive acts against OEMs" via the company's "no license, no chips" policy. *Qualcomm*, 411 F. Supp. 3d at 697–744. Yet when the district court set forth its primary theory of anticompetitive harm—that Qualcomm's licensing royalty rates "impose a surcharge on rivals' modem chips," thereby inhibiting free and fair competition in the relevant markets—it did so only in passing. *Id.* at 790–92.

Moreover, throughout its analysis, the district court failed to distinguish between Qualcomm's *licensing* practices (which primarily impacted OEMs) and its practices relating to *modem chip sales* (the relevant antitrust market). This was, no doubt, intentional: the district court

characterized Qualcomm's various business practices as "interrelated" and mutually reinforcing, and it described their anticompetitive effects as "compounding" and "cycl[ical]." *Id.* at 797–98. But even if Qualcomm's practices are interrelated, actual or alleged harms to customers and consumers outside the relevant markets are beyond the scope of antitrust law.

III

Accordingly, we reframe the issues to focus on the impact, if any, of Qualcomm's practices in the area of effective competition: the markets for CDMA and premium LTE modem chips. Thus, we begin by examining the district court's conclusion that Qualcomm has an antitrust duty to license its SEPs to its direct competitors in the modem chip markets. We then consider Qualcomm's royalty rates, its "no license, no chips" policy, and its agreements with Apple in 2011 and 2013 to supply all or a substantial portion of the modem chips Apple used for its pre-2016 model iPhones.

Throughout our analysis, we review for clear error the district court's findings of fact and we review de novo its conclusions of law and any mixed questions of law and fact. *OneBeacon Ins. Co. v. Haas Indus., Inc.*, 634 F.3d 1092, 1096 (9th Cir. 2011).

A

"As the Supreme Court has repeatedly emphasized, there is 'no duty to deal under the terms and conditions preferred by [a competitor's] rivals[.]" *Aerotec Int'l*, 836 F.3d at 1184 (quoting *Pac. Bell Tel. Co. v. linkLine Commc'ns, Inc.*, 555 U.S. 438, 457 (2009) ("*linkLine*")). Likewise, "the Sherman Act 'does not restrict the long recognized right of [a] trader or manufacturer engaged in an entirely private

business, freely to exercise his own independent discretion as to parties with whom he will deal.'" *Trinko*, 540 U.S. at 408 (alteration in original) (quoting *United States v. Colgate & Co.*, 250 U.S. 300, 307 (1919)); *see linkLine*, 555 U.S. at 448 ("As a general rule, businesses are free to choose the parties with whom they will deal, as well as the prices, terms, and conditions of that dealing." (citing *Colgate*, 250 U.S. at 307)). This is because the antitrust laws, including the Sherman Act, "were enacted for 'the protection of *competition,* not *competitors*.'" *Brunswick Corp. v. Pueblo Bowl–O–Mat, Inc.*, 429 U.S. 477, 488 (1977) (emphasis added) (quoting *Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962)). Or, as we recently put it, in a bit more colorful terms: "Competitors are not required to engage in a lovefest." *Aerotec Int'l*, 836 F.3d at 1184.

The one, limited exception to this general rule that there is no antitrust duty to deal comes under the Supreme Court's decision in *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985). There, the Court held that a company engages in prohibited, anticompetitive conduct when (1) it "unilateral[ly] terminat[es] . . . a voluntary and profitable course of dealing," *MetroNet Servs. Corp. v. Qwest Corp.*, 383 F.3d 1124, 1132 (9th Cir. 2004); (2) "the only conceivable rationale or purpose is 'to sacrifice short-term benefits in order to obtain higher profits in the long run from the exclusion of competition,'" *Aerotec Int'l*, 836 F.3d at 1184 (quoting *MetroNet Servs.*, 383 F.3d at 1132); and (3) the refusal to deal involves products that the defendant already sells in the existing market to other similarly situated customers, *see MetroNet Servs.*, 383 F.3d at 1132–33. The Supreme Court later characterized the *Aspen Skiing* exception as "at or near the outer boundary of § 2 liability." *Trinko*, 540 U.S. at 409.

The district court's conclusion that Qualcomm's refusal to provide exhaustive SEP licenses to rival chip suppliers meets the *Aspen Skiing* exception ignores critical differences between Qualcomm's business practices and the conduct at issue in *Aspen Skiing*, and it ignores the Supreme Court's subsequent warning in *Trinko* that the *Aspen Skiing* exception should be applied only in rare circumstances. As a result, the FTC concedes error here. We agree.

First, the district court was incorrect that "Qualcomm terminated a 'voluntary and profitable course of dealing'" with respect to its previous practice of licensing at the chip-manufacturer level. *Qualcomm*, 411 F. Supp. 3d at 759–60 (quoting *MetroNet Servs.*, 383 F.3d at 1131). In support of this finding, the district court cited a single piece of record evidence: an email from a Qualcomm lawyer regarding 3%-royalty-bearing licenses for modem chip suppliers. But this email was sent in 1999, seven years before Qualcomm gained monopoly power in the CDMA modem chip market. Furthermore, Qualcomm claims that it never granted exhaustive licenses to rival chip suppliers. Instead, as the 1999 email suggests, it entered into "non-exhaustive, royalty-bearing agreements with chipmakers that explicitly did not grant rights to the chipmaker's customers." Appellant's Opening Br. at 45.

According to Qualcomm, it ceased this practice in response to developments in patent law's exhaustion doctrine, *see, e.g.*, *Quanta Comput.*, 553 U.S. at 625 (noting that "the initial authorized sale of a patented item terminates all patent rights to that item"), which made it harder for Qualcomm to argue that it could provide "non-exhaustive" licenses in the form of royalty agreements. Nothing in the record or in the district court's factual findings rebuts these claims. The FTC offered no evidence that, from the time

Qualcomm first gained monopoly power in the modem chip market in 2006 until now, it ever had a practice of providing exhaustive licenses at the modem chip level rather than the OEM level.

Second, Qualcomm's rationale for "switching" to OEM-level licensing was not "to sacrifice short-term benefits in order to obtain higher profits in the long run from the exclusion of competition," the second element of the *Aspen Skiing* exception. *Aerotec Int'l*, 836 F.3d at 1184 (internal quotation marks and citation omitted). Instead, Qualcomm responded to the change in patent-exhaustion law by choosing the path that was "far more lucrative," both in the short term *and* the long term, regardless of any impacts on competition. *Qualcomm*, 411 F. Supp. 3d at 753. The district court itself acknowledged that this was Qualcomm's purpose, observing: "Following Qualcomm's lead, other SEP licensors like Nokia and Ericsson have concluded that licensing only OEMs is more lucrative, and structured their practices accordingly." *Id.* at 754–55. Because Qualcomm's purpose was greater profits in both the short and long terms, the second required element of the *Aspen Skiing* exception is not present in this case.[15]

[15] Throughout its analysis, the district court conflated the desire to maximize profits with an intent to "destroy competition itself." *Spectrum Sports*, 506 U.S. at 458. As noted *supra*, the goal of antitrust law is not to force businesses to forego profits or even "[t]he opportunity to charge monopoly prices," which is "what attracts 'business acumen' in the first place." *Trinko*, 540 U.S. at 407. Here, Qualcomm's desire to maximize profits both in the short-term *and* the long-term undermines, rather than supports, the district court's finding of anticompetitive conduct under § 2. *See* Douglas H. Ginsburg et al., *Section 2 Mangled:* FTC v. Qualcomm *on the Duty to Deal, Price Squeezes, and Exclusive Dealing* 13 (Geo. Mason U. Law & Econ. Res. Paper Series, Paper

Finally, unlike in *Aspen Skiing*, the district court found no evidence that Qualcomm singles out any specific chip supplier for anticompetitive treatment in its SEP-licensing. In *Aspen Skiing*, the defendant refused to sell its lift tickets to a smaller, rival ski resort even as it sold the same lift tickets to any other willing buyer (including any *other* ski resort); moreover, this refusal was designed specifically to put the smaller, nearby rival out of business. 472 U.S. at 593–94. Qualcomm applies its OEM-level licensing policy equally with respect to all competitors in the modem chip markets and declines to enforce its patents against these rivals even though they practice Qualcomm's patents (royalty-free). Instead, Qualcomm provides these rivals indemnifications through the use of "CDMA ASIC Agreements"—the *Aspen Skiing* equivalent of refusing to sell a skier a lift ticket but letting them ride the chairlift anyway. Thus, while Qualcomm's policy toward OEMs is "no license, no chips," its policy toward rival chipmakers could be characterized as "no license, no problem." Because Qualcomm applies the latter policy neutrally with respect to *all* competing modem chip manufacturers, the third *Aspen Skiing* requirement does not apply.

As none of the required elements for the *Aspen Skiing* exception are present, let alone all of them, the district court erred in holding that Qualcomm is under an antitrust duty to license rival chip manufacturers. We hold that Qualcomm's

---

No. 19-21, 2019) ("The district court expands *Aspen Skiing* well beyond the 'outer boundary' of Section 2 by applying it to all contracts previously negotiated by the defendant firm and by inferring the firm was willing to sacrifice profits even in the face of evidence the firm had changed its business model to *increase* current profits.").

OEM-level licensing policy, however novel, is not an anticompetitive violation of the Sherman Act.

B

Conceding error in the district court's conclusion that Qualcomm is subject to an antitrust duty to deal under *Aspen Skiing*, the FTC contends that this court may nevertheless hold that Qualcomm engaged in anticompetitive conduct in violation of § 2. This is so, the FTC urges, because (1) "Qualcomm entered into a voluntary contractual commitment to deal with its rivals as part of the SSO process, which is itself a derogation from normal market competition," and (2) Qualcomm's breach of this contractual commitment "satisfies traditional Section 2 standards [in that] it 'tends to impair the opportunities of rivals and . . . does not further competition on the merits.'" Appellee's Br. at 69, 77 (quoting *Cascade Health Sols. v. PeaceHealth*, 515 F.3d 883, 894 (9th Cir. 2008)). We disagree.

Even if the district court is correct that Qualcomm is contractually obligated via its SSO commitments to license rival chip suppliers—a conclusion we need not and do not reach[16]—the FTC still does not satisfactorily explain how Qualcomm's alleged breach of this contractual commitment *itself* impairs the opportunities of rivals. It argues the breach "facilitat[es] Qualcomm's collection of a surcharge from rivals' customers." Appellee's Br. at 77. But this refers to a distinct business practice, licensing royalties, and alleged harm to OEMs, not rival chipmakers. In any case, Qualcomm's royalties are "chip-supplier neutral" because Qualcomm collects them from *all* OEMs that license its patents, not just "rivals' customers." The FTC argues that

[16] *See supra* notes 12 and 13.

Qualcomm's breach directly impacts rivals by "otherwise deterring [their] entry and investment." *Id.* But this ignores that Qualcomm's "CDMA ASIC Agreements" functionally act as de facto licenses ("no license, no problem") by allowing competitors to practice Qualcomm's SEPs (royalty-free) before selling their chips to downstream OEMs. Furthermore, in order to make out a § 2 violation, the anticompetitive harm identified must be to *competition itself*, not merely to competitors. *Microsoft*, 253 F.3d at 58. The FTC identifies no such harm to competition.

The FTC's conclusion that OEM-level licensing does not further competition on the merits is not only belied by MediaTek and Intel's entries into the modem chip markets in the 2015–2016 timeframe, it also gives inadequate weight to Qualcomm's reasonable, procompetitive justification that licensing at the OEM and chip-supplier levels simultaneously would require the company to engage in "multi-level licensing," leading to inefficiencies and less profit. Qualcomm's procompetitive justification is supported by at least two other companies—Nokia and Dolby—with similar SEP portfolios to Qualcomm's.[17] More critically, this part of the FTC's argument skips ahead

[17] *See* Br. of Amicus Curiae Nokia Technologies Oy at 18–19 (noting that "[t]here are good reasons for SEP owners to structure their licensing programs to license end-user products," including the reduction of "transaction costs and complexities associated with negotiating and executing licenses at multiple points in the supply chain," the avoidance of "overlapping and duplicative licensing," "expedite[d] access to SEPs for the entire supply chain," and "greater visibility to what products are actually licensed, for example, for auditing purposes"); Br. of Amicus Curiae Dolby Laboratories, Inc. at 28 ("Forcing SEP holders to license component suppliers would interfere with historical precedents and established practices, and produce significant inefficiencies and lack of transparency regarding whether products in the stream of commerce are in fact licensed.").

to an examination of Qualcomm's procompetitive justifications, failing to recognize that the burden does not shift to Qualcomm to provide such justifications unless and until the FTC meets its initial burden of proving anticompetitive harm. Because the FTC has not met its initial burden under the rule of reason framework, we are less critical of Qualcomm's procompetitive justifications for its OEM-level licensing policy—which, in any case, appear to be reasonable and consistent with current industry practice.

The FTC points to one case, *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297 (3rd Cir. 2007), as support for its argument that a company's breach of its SSO commitments may rise to the level of an antitrust violation. But in that earlier antitrust action against Qualcomm, the alleged anticompetitive conduct was not Qualcomm's practice of licensing at the OEM level while not enforcing its patents against rival chip suppliers; instead, Broadcom asserted that Qualcomm intentionally deceived SSOs by inducing them to standardize one of its patented technologies, which it then licensed at "discriminatorily higher" royalty rates to competitors and customers using non-Qualcomm chipsets. *Id.* at 304. The *Broadcom* court held that Qualcomm's "intentionally false promise to license [its SEP] on FRAND terms . . . coupled with an SDO's reliance on that promise" and Qualcomm's subsequent discriminatory pricing sufficiently alleged "actionable anticompetitive conduct" under § 2 to overcome Qualcomm's motion to dismiss. *Id.* at 314.

Here, the district court found neither intentional deception of SSOs on the part of Qualcomm nor that Qualcomm charged discriminatorily higher royalty rates to competitors and OEM customers using non-Qualcomm

chips. Instead, it is undisputed that Qualcomm's current royalty rates—which the district court found "unreasonably high" (a finding discussed in greater detail in the next section of our opinion)—are based on the patent portfolio chosen by the OEM customer regardless of where the OEM sources its chips. Furthermore, competing chip suppliers are permitted to practice Qualcomm's SEPs freely without paying any royalties at all. Thus, the Third Circuit's "intentional deception" exception to the general rule that breaches of SSO commitments do not give rise to antitrust liability does not apply to this case.[18]

Finally, we note the persuasive policy arguments of several academics and practitioners with significant experience in SSOs, FRAND, and antitrust enforcement, who have expressed caution about using the antitrust laws to remedy what are essentially contractual disputes between private parties engaged in the pursuit of technological innovation. The Honorable Paul R. Michel, retired Chief Judge of the Court of Appeals for the Federal Circuit, argues that it would be a mistake to use "the hammer of antitrust law . . . to resolve FRAND disputes when more precise scalpels of contract and patent law are effective." Amicus Curiae Br. of The Honorable Paul R. Michel (Ret.) at 23.

---

[18] *See* Wright, *supra* note 1, at 803 ("There is no empirical evidence that supports the proposition that breach of an SSO contract—even one resulting in higher royalty rates—is somehow analogous to the collusive interaction between rivals conventionally condemned by the antitrust laws, or that it generates similar economic effects. Furthermore, courts have uniformly rejected this view when interpreting and applying the Sherman Act. In particular, to date there does not appear to be a single case that finds breach of an SSO agreement without proof that deception resulted in acquisition of market power, a violation of the Sherman Act." (citing *Rambus Inc. v. FTC*, 522 F.3d 456, 466–67 (D.C. Cir. 2008), *cert. denied*, 555 U.S. 1171 (2009); *Broadcom*, 501 F.3d at 310–12)).

Judge Michel notes that "[w]hile antitrust policy has its place as a policy lever to enhance market competition, the rules of contract and patent law are better equipped to handle commercial disputes between the world's most sophisticated companies about FRAND agreements." *Id.* at 24. Echoing this sentiment, a former FTC Commissioner, Joshua Wright, argues that "the antitrust laws are not well suited to govern contract disputes between private parties in light of remedies available under contract or patent law," and that "imposing antitrust remedies in pure contract disputes can have harmful effects in terms of dampening incentives to participate in standard-setting bodies and to commercialize innovation." Wright, *supra* note 1, at 808–09.

In short, we are not persuaded by the FTC's argument that we should adopt an additional exception, beyond the *Aspen Skiing* exception that the FTC concedes does not apply here, to the general rule that "businesses are free to choose the parties with whom they will deal, as well as the prices, terms, and conditions of that dealing." *linkLine*, 555 U.S. at 448 (citing *Colgate*, 250 U.S. at 307). We therefore decline to hold that Qualcomm's alleged breach of its SSO commitments to license its SEPs on FRAND terms, even assuming there was a breach, amounted to anticompetitive conduct in violation of § 2.

C

We next address the district court's primary theory of anticompetitive harm: Qualcomm's imposition of an "anticompetitive surcharge" on rival chip suppliers via its licensing royalty rates. According to the district court,

> Qualcomm's unreasonably high royalty rates enable Qualcomm to control rivals' prices because Qualcomm receives the royalty even

> when an OEM uses one of Qualcomm's rival's chips. Thus, the "all-in" price of any modem chip sold by one of Qualcomm's rivals effectively includes two components: (1) the nominal chip price; and (2) Qualcomm's royalty surcharge.

Qualcomm, 411 F. Supp. 3d at 791. This central component of the district court's ruling is premised on the district court's findings that Qualcomm's royalty rates are (1) "unreasonably high" because they are improperly based on Qualcomm's monopoly chip market share and handset price instead of the "fair value of Qualcomm's patents," and (2) anticompetitive because they raise costs to OEMs, who pass the extra costs along to consumers and are forced to invest less in other handset features. *Id.* at 773–90, 795, 820–21. The FTC agrees with this aspect of the district court's ruling, pointing out that its "reasonableness" determination regarding Qualcomm's royalty rates is a factual finding subject to clear error review and arguing that this finding "was supported by overwhelming evidence." Appellee's Br. at 44 (citing *Faulkner v. Gibbs*, 199 F.2d 635, 639 (9th Cir. 1952)).

We hold that the district court's "anticompetitive surcharge" theory fails to state a cogent theory of anticompetitive harm. Instead, it is premised on a misunderstanding of Federal Circuit law pertaining to the calculation of patent damages, it incorrectly conflates antitrust liability and patent law liability, and it improperly considers "anticompetitive harms to OEMs" that fall outside the relevant antitrust markets. Furthermore, even if we were to accept the district court's conclusion that Qualcomm's royalty rates are unreasonable, we conclude that the district

court's surcharging theory still fails as a matter of law and logic.

1

First, the district court's determination that Qualcomm's royalty rates are "unreasonable" because they are based on handset prices misinterprets Federal Circuit law regarding "the patent rule of apportionment" and the smallest salable patent-practicing unit ("SSPPU"). The district court observed "that 'it is generally required that royalties be based not on the entire product, but instead on the [SSPPU].'" *Qualcomm*, 411 F. Supp. 3d at 783 (quoting *LaserDynamics, Inc. v. Quanta Comput., Inc.*, 694 F.3d 51, 67 (Fed. Cir. 2012)). The district court then cited an unpublished, district court case for the proposition that "the modem chip . . . 'is the proper [SSPPU]' in a cellular handset." *Id.* (quoting *GPNE Corp. v. Apple, Inc.*, No. 12-CV-02885-LHK, 2014 WL 1494247, at *13 (N.D. Cal. Apr. 16, 2014)).[19] Based on *LaserDynamics* and *GPNE*, the district court concluded that "Qualcomm is not entitled to a royalty on the entire handset." *Id.*

Even if we accept that the modem chip in a cellphone is the cellphone's SSPPU, the district court's analysis is still fundamentally flawed. No court has held that the SSPPU concept is a per se rule for "reasonable royalty" calculations; instead, the concept is used as a tool in jury cases to minimize potential jury confusion when the jury is weighing complex expert testimony about patent damages. *See Ericsson*, 773 F.3d at 1226 (explaining that the SSPPU concept is a flexible evidentiary tool, not an unyielding

[19] *GPNE* was presided over by the same district court judge that presided over this case.

substantive element of patent damages law); *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1327–28 (Fed. Cir. 2014) (same); *LaserDynamics*, 694 F.3d at 68 (same). As this case involved a bench trial, the potential for jury confusion was absent.

Moreover, the Federal Circuit rejected the premise of the district court's determination: that the SSPPU concept is *required* when calculating patent damages. *See Commonwealth Sci. & Indus. Research Org. v. Cisco Sys., Inc.*, 809 F.3d 1295, 1303 (Fed. Cir. 2015) ("The rule Cisco advances—which would require all damages models to begin with the [SSPPU]—is untenable [and] conflicts with our prior approvals of a methodology that values the asserted patent based on comparable licenses.") (citations omitted). The Federal Circuit has also observed that "'[s]ophisticated parties routinely enter into license agreements that base the value of the patented inventions as a percentage of the commercial products' sales price,' and thus '[t]here is nothing inherently wrong with using the market value of the entire product.'" *Exmark Mfg. Co. Inc. v. Briggs & Stratton Power Prods. Grp., LLC*, 879 F.3d 1332, 1349 (Fed. Cir. 2018) (some alterations in original) (quoting *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1339 (Fed. Cir. 2009)). These statements of law and current practice run counter to the district court's conclusion that patent royalties *cannot* be based on total handset price and that doing so exposes a firm to potential antitrust liability.

A second problem with the district court's "unreasonable royalty rate" conclusion is that it erroneously assumes that royalties are "anticompetitive"—in the antitrust sense—unless they precisely reflect a patent's current, intrinsic value and are in line with the rates other companies charge for their own patent portfolios. Neither the district court nor

the FTC provides any case law to support this proposition, which sounds in patent law, not antitrust law. *See* 35 U.S.C. § 284 (entitling a patent owner to "damages adequate to compensate for the infringement, but in no event less than a *reasonable royalty* for the use made of the invention by the infringer" (emphasis added)). We decline to adopt a theory of antitrust liability that would presume anticompetitive conduct any time a company could not prove that the "fair value" of its SEP portfolios corresponds to the prices the market appears willing to pay for those SEPs in the form of licensing royalty rates.[20]

Finally, even assuming that a deviation between licensing royalty rates and a patent portfolio's "fair value" could amount to "anticompetitive harm" in the antitrust sense, the primary harms the district court identified here were to the OEMs who agreed to pay Qualcomm's royalty rates—that is, Qualcomm's *customers*, not its *competitors*. These harms were thus located outside the "areas of effective competition"—the markets for CDMA and premium LTE modem chips—and had no direct impact on competition in those markets. *See Rambus*, 522 F.3d at 464 (noting that if a practice "raises the price secured by a seller" or otherwise

[20] Qualcomm and several amici additionally argue that the district court committed reversible legal error by failing to apply the governing legal standard for determining whether a royalty is reasonable—that is, by "using the claimant's established royalties." Appellant's Reply Br. at 16–17 (quoting *U.S. Nat'l Bank of Portland v. Fabri-Valve Co. of Am.*, 235 F.2d 565, 568 (9th Cir. 1956)); *see also, e.g.*, Amicus Curiae Br. of The Honorable Paul R. Michel (Ret.) at 18–22 (discussing a long line of Federal Circuit cases emphasizing the "established royalty" rule and criticizing the district court's failure to even acknowledge this body of case law). Because our holding does not depend on the "reasonableness" of a licensor's royalties, a determination that sounds in patent law and not antitrust law, we need not decide whether the method the district court used to assess reasonableness in this case was erroneous.

harms customers, "but does so without harming competition, it is beyond the antitrust laws' reach"); *accord NYNEX Corp. v. Discon, Inc.*, 525 U.S. 128, 136 (1998) (no Sherman Act violation where "consumer injury naturally flowed not so much from a less competitive market . . . as from the exercise of market power that is *lawfully* in the hands of a monopolist . . . combined with a deception worked upon the regulatory agency that prevented the agency from controlling [the monopolist's] exercise of its monopoly power").

2

Regardless of the "reasonableness" of Qualcomm's royalty rates, the district court erred in finding that these royalties constitute an "artificial surcharge" on rivals' chip sales. In *Caldera, Inc. v. Microsoft Corp.*, 87 F. Supp. 2d 1244 (D. Utah 1999), the primary case relied upon by the district court for its surcharging theory, Microsoft required OEMs "to pay [it] a royalty on every machine the OEM shipped regardless of whether the machine contained MS DOS or another operating system." *Id.* at 1249–50. This resulted in OEMs having to pay two royalties instead of one for a portion of their product base unless they chose to exclusively install Microsoft's operating system in their products. *Id.* at 1250. Microsoft's policy thus had "the practical effect of exclusivity," as it imposed a naked tax on rivals' software even when the end-product—an individual computer installed with a non-Microsoft operating system—contained no added value from Microsoft. *Id.* The *Caldera* court held that this hidden surcharge, combined with Microsoft's related practices that were designed to secure exclusivity, were sufficient to defeat Microsoft's motion for summary judgment on the question of whether its policy

amounted to anticompetitive conduct in violation of § 2. *Id.* at 1250–51.

Qualcomm's licensing royalties are qualitatively different from the per-unit operating-system royalties at issue in *Caldera*. When Qualcomm licenses its SEPs to an OEM, those patent licenses have value—indeed, they are necessary to the OEM's ability to market and sell its cellular products to consumers—regardless of whether the OEM uses Qualcomm's modem chips or chips manufactured and sold by one of Qualcomm's rivals. And unlike *Caldera*, where OEMs who installed non-Microsoft operating systems in some of their products were required to pay royalties for both the actual operating system *and* MS DOS (which was not installed), here OEMs do not pay twice for SEP licenses when they use non-Qualcomm modem chips. Thus, unlike Microsoft's practice, Qualcomm's practice does not have the "practical effect of exclusivity." Even the FTC concedes that "this case differs from *Caldera* in [that] Qualcomm holds patents practiced by its rivals' chips, and no one disputes that Qualcomm is entitled to collect a royalty equal to the reasonable value of those patents." Appellee's Br. at 39.

In its complaint and in its briefing, the FTC suggests that Qualcomm's royalty rates impose an anticompetitive surcharge on its rivals' sales not for the reasons at play in *Caldera*, but rather because Qualcomm uses its licensing royalties to charge anticompetitive, ultralow prices on its own modem chips—pushing out rivals by squeezing their profit margins and preventing them from making necessary investments in research and development.[21] But this type of

[21] One of Qualcomm's main competitors, Intel, shares this theory. *See* Br. of Intel Corporation as Amicus Curiae at 3–4 (arguing that

"margin squeeze" was rejected as a basis for antitrust liability in *linkLine*. 555 U.S. at 451–52, 457. There, multiple digital subscriber line ("DSL") high-speed internet service providers complained that AT&T was selling them access to AT&T's must-have telephone lines and facilities at inflated wholesale rates and then shifting those increased profits to charge ultra-low rates for DSL services at retail, effectively squeezing these DSL competitors out of the market. *Id.* at 442–44. The Court rejected the plaintiffs' assertion of anticompetitive harm, holding that AT&T was under no antitrust duty to deal with its competitors on the wholesale level, and that the plaintiffs failed to introduce evidence of predatory pricing (that is, charging below cost) at the retail level.[22] *Id.* at 450–51.

Here, not only did the FTC offer no evidence that Qualcomm engaged in predatory pricing, the district court's entire antitrust analysis is premised on the opposite proposition: that Qualcomm "charge[s] monopoly prices on modem chips." *Qualcomm*, 411 F. Supp. 3d at 800. Indeed, the district court faulted Qualcomm for lowering its prices only when other companies introduced CDMA modem chips to the market to effectively compete. *Id.* at 688–89. We

---

Qualcomm "shift[s] part of its chip revenues into its royalty rates, overcharging on the patent royalty, while undercharging for chips . . . [which] destroys the normal competitive process in the chip market").

[22] The Court explained in *linkLine* that "to prevail on a predatory pricing claim, a plaintiff must demonstrate that: (1) 'the prices complained of are below an appropriate measure of its rival's costs'; and (2) there is a 'dangerous probability' that the defendant will be able to recoup its 'investment' in below-cost prices." 555 U.S. at 451 (quoting *Brooke Grp. Ltd.*, 509 U.S. at 222–24); *see also Atl. Richfield Co. v. USA Petroleum Co.*, 495 U.S. 328, 340 (1990) ("Low prices benefit consumers regardless of how those prices are set, and so long as they are above predatory levels, they do not threaten competition.").

agree with Qualcomm that this is exactly the type of "garden-variety price competition that the law encourages," Appellant's Reply Br. at 43, and are aware of no authority holding that a monopolist may not lower its rates in response to a competitor's entry into the market with a lower-priced product.

D

As with its critique of Qualcomm's royalty rates, the district court's analysis of Qualcomm's "no license, no chips" policy focuses almost exclusively on alleged "anticompetitive harms" to OEMs—that is, impacts outside the relevant antitrust market. The district court labeled Qualcomm's policy "anticompetitive conduct against OEMs" and an "anticompetitive practice[] in patent license negotiations." *Qualcomm*, 411 F. Supp. 3d at 697–98. But the district court failed to identify how the policy directly impacted Qualcomm's competitors or distorted "the area of effective competition." *Am. Express*, 138 S. Ct. at 2285. Although OEMs consistently described Qualcomm's "no license, no chips" policy as "unique in the industry," none articulated a cogent theory of anticompetitive harm. Instead, they objected to Qualcomm's licensing royalty rates, which they have to pay *regardless* of whether they chose to purchase their chips from Qualcomm or a competitor (or else risk a patent infringement suit from Qualcomm).

Furthermore, it appears that OEMs have been somewhat successful in "disciplining" Qualcomm's pricing through arbitration claims, negotiations, threatening to move to different chip suppliers, and threatened or actual antitrust litigation. These maneuvers generally resulted in settlements and renegotiated licensing and chip-supply agreements with Qualcomm, even as OEMs continued to look elsewhere for cheaper modem chip options. A good

example of this is Apple's 2014 decision to switch to Intel as its main chip supplier, demonstrating that Qualcomm's "no license, no chips" policy did not foreclose competition in the modem chip markets.

According to the FTC, the problem with "no license, no chips" is that, under the policy, "Qualcomm will not sell chips to a cellphone [OEM] like Apple or Samsung unless the OEM agrees to a license that requires it to pay a substantial per-phone surcharge *even on phones that use rivals' chips*." Appellee's Br. at 1 (emphasis in original).[23] But this argument is self-defeating: if the condition imposed on gaining access to Qualcomm's chip supply applies regardless of whether the OEM chooses Qualcomm or a competitor (in fact, this appears to be the essence of Qualcomm's policy), then the condition by definition does not distort the "area of effective competition" or impact competitors. At worst, the policy raises the "all-in" price that an OEM must pay for modem chips (chipset + licensing royalties) regardless of which chip supplier the OEM chooses to source its chips from. As we have already discussed, whether that all-in price is reasonable or unreasonable is an issue that sounds in patent law, not antitrust law. Additionally, it involves potential harms to Qualcomm's *customers*, not its competitors, and thus falls outside the relevant antitrust markets.

The district court stopped short of holding that the "no license, no chips" policy itself violates antitrust law. For

[23] *See also* Appellee's Br. at 9 ("Qualcomm uses its chip monopoly to force OEMs to pay Qualcomm a surcharge *even when they use its rivals' chips*.") (emphasis in original); *id.* at 35 ("[Qualcomm] forced customers to accept terms that raised the costs of using rivals' chips, as a condition of access to its own must-have chips.").

good reason: neither the Sherman Act nor any other law prohibits companies like Qualcomm from (1) licensing their SEPs independently from their chip sales and collecting royalties, and/or (2) limiting their chip customer base to licensed OEMs. As we have noted, "[a]s a general rule, businesses are free to choose the parties with whom they will deal, as well as the prices, terms, and conditions of that dealing." *linkLine*, 555 U.S. at 448 (2009) (citing *Colgate*, 250 U.S. at 307); *cf. Am. Express*, 138 S. Ct. at 2289–90 (holding that Amex's antisteering provisions did not unduly restrain trade). Indeed, the FTC accepts that this is the state of the law when it concedes that "Qualcomm holds patents practiced by its rivals' chips, and . . . is entitled to collect a royalty" on them. Appellee's Br. at 39.

In addition, the district court's criticism of "no license, no chips" treats that policy as if Qualcomm is making SEP licenses contingent upon chip purchases, instead of the other way around. If Qualcomm were to refuse to license its SEPs to OEMs unless they first agreed to purchase Qualcomm's chips ("no chips, no license"), then rival chip suppliers indeed might have an antitrust claim under both §§ 1 and 2 of the Sherman Act based on exclusionary conduct. This is because OEMs cannot sell their products *without* obtaining Qualcomm's SEP licenses, so a "no chips, no license" policy would essentially force OEMs to either purchase Qualcomm's chips or pay for *both* Qualcomm's and a competitor's chips (similar to the no-win situation faced by OEMs in the *Caldera* case). But unlike a hypothetical "no chips, no license" policy, "no license, no chips" is chip-neutral: it makes no difference whether an OEM buys Qualcomm's chip or a rival's chips. The policy only insists that, whatever chip source an OEM chooses, the OEM pay Qualcomm for the right to practice the patented technologies

embodied in the chip, as well as in other parts of the phone or other cellular device.

This is not to say that Qualcomm's "no license, no chips" policy is not "unique in the industry" (it is), or that the policy is not designed to maximize Qualcomm's profits (Qualcomm has admitted as much). But profit-seeking behavior alone is insufficient to establish antitrust liability. As the Supreme Court stated in *Trinko*, the opportunity to charge monopoly prices "is an important element of the free-market system" and "is what attracts 'business acumen' in the first place; it induces risk taking that produces innovation and economic growth." *Trinko*, 540 U.S. at 407. The record suggests that this case is more like *Am. Express*, where a company's novel business practice at first appeared to be anticompetitive, but in fact was disruptive in a manner that was beneficial to consumers in the long run because it forced rival credit card companies to adapt and innovate. 138 S. Ct. at 2290. Similarly here, companies like Nokia and Ericsson are now "[f]ollowing Qualcomm's lead" with respect to OEM-level licensing, and beginning in 2015 rival chipmakers began to successfully compete against Qualcomm in the modem chip markets. We decline to ascribe antitrust liability in these dynamic and rapidly changing technology markets without clearer proof of anticompetitive effect.

E

Having addressed the primary components of the district court's antitrust ruling with respect to Qualcomm's general business practices, we now address the district court's more specific finding that from 2011 to 2015, Qualcomm violated both sections of the Sherman Act by signing "exclusive deals" with Apple that "foreclosed a 'substantial share' of the [CDMA] modem chip market." *Qualcomm*, 411 F.

Supp. 3d at 771–72 (quoting *Tampa Elec. Co. v. Nashville Coal Co.*, 365 U.S. 320, 327 (1961)).

"Exclusive dealing involves an agreement between a vendor and a buyer that prevents the buyer from purchasing a given good from any other vendor." *Allied Orthopedic*, 592 F.3d at 996. Because "[t]here are 'well-recognized economic benefits to exclusive dealing arrangements, including the enhancement of interbrand competition,'" an exclusive dealing arrangement is not per se illegal. *Id.* (quoting *Omega Envtl., Inc. v. Gilbarco, Inc.*, 127 F.3d 1157, 1162 (9th Cir. 1997)). Instead, such an arrangement violates the Sherman Act under the rule of reason only if "its effect is to 'foreclose competition in a substantial share of the line of commerce affected.'" *Id.* (quoting *Omega Envtl.*, 127 F.3d at 1162); *see also Caldera*, 87 F. Supp. 2d at 1251 ("[T]he competition foreclosed by the contract must be found to constitute a substantial share of the relevant market . . . [t]hat is to say, the opportunities for other traders to enter into or remain in that market must be significantly limited") (quoting *Tampa Elec.*, 365 U.S. at 328).

Qualcomm argues that its agreements with Apple were "volume discount contracts, not exclusive dealings contracts." Unlike exclusive dealing arrangements, "volume discount contracts are legal under antitrust law . . . [b]ecause the contracts do not preclude consumers from using other . . . services." *W. Parcel Express v. United Parcel Serv. of Am., Inc.*, 190 F.3d 974, 976 (9th Cir. 1999) (citing *Fedway Assocs., Inc. v. United States Treasury*, 976 F.2d 1416, 1418 (D.C. Cir. 1992)). Likewise, conditional agreements that provide "substantial discounts to customers that actually purchase[] a high percentage of their . . . requirements from" a firm are not exclusive dealing arrangements, de facto or actual, unless they "prevent[] the buyer from purchasing a

given good from any other vendor." *Allied Orthopedic*, 592 F.3d at 996–97; *see also* XI Philip E. Areeda & Herbert Hovenkamp, Antitrust Law, ¶ 1807a at 129 (2d ed. 2000) (noting that "[d]iscounts conditioned on exclusivity in relatively short-term contracts are rarely problematic").

The district court concluded that the Apple agreements were not volume discount contracts, but rather "de facto exclusive deals" that "coerced '[Apple] into purchasing a substantial amount of [its] needs from [Qualcomm]'" and thereby "'substantially foreclosed competition' in the [CDMA modem chip] market." *Qualcomm*, 411 F. Supp. 3d at 763, 766 (some alterations in original) (quoting *Aerotec Int'l*, 836 F.3d at 1182; *Tampa Elec.*, 365 U.S. at 334). The FTC argues that these agreements "'easily' qualified as *de facto* exclusive-dealing agreements under *Tampa Electric*'s 'practical effect' test." Appellee's Br. at 87; *see Tampa Elec.*, 365 U.S. at 326 (holding that a contract is exclusive, even though it does not contain specific agreements not to use the goods of a competitor, if its "practical effect" is to prevent such use) (citation omitted).

There is some merit in the district court's conclusion that the Apple agreements were structured more like exclusive dealing contracts than volume discount contracts.[24]

[24] Of note, the agreements did not *just* provide substantial discounts to Apple in exchange for Apple "purchas[ing] a high percentage of [its] . . . requirements from" Qualcomm. *Allied Orthopedic*, 592 F.3d at 996. Instead, they sought to "prevent[] the buyer [Apple] from purchasing a given good [CDMA modem chips] from any other vendor," *id.*, by making volume discounts (or "incentive funds") contingent on exclusivity. Nor were these agreements "easily terminable," even though Apple did, in fact, terminate them. *See id.* at 997 (noting that "[t]he 'easy terminability' of an exclusive dealing arrangement 'negate[s] substantially [its] potential to foreclose competition'"

However, we do not agree that these agreements had the actual or practical effect of substantially foreclosing competition in the CDMA modem chip market, or that injunctive relief is warranted.

During the relevant time period (2011–2015), the record suggests that the only serious competition Qualcomm faced with respect to the Apple contracts was from Intel, a company from whom Apple had considered purchasing modem chips prior to signing the 2013 agreement with Qualcomm. The district court made no finding that any other specific competitor or potential competitor was affected by either of Qualcomm's agreements with Apple, and it is undisputed that Intel won Apple's business *the very next year*, in 2014, when Apple's engineering team unanimously recommended that the company select Intel as an alternative supplier of modem chips. The district court found that "Qualcomm's exclusive deals . . . delayed Intel's ability to sell modem chips to Apple until September 2016." *Id.* at 737. There is no indication in the record, however, that Intel was a viable competitor to Qualcomm prior to 2014–2015, or that the 2013 agreement delayed Apple's transition to Intel by any more than one year.[25] Given these undisputed facts, we conclude that the 2011 and 2013 agreements did

(quoting *Omega Envtl.*, 127 F.3d at 1163–64)). Clearly, the requirement that Apple forfeit or reimburse Qualcomm millions of dollars in incentive funds was a strong deterrent to termination.

[25] *See* Appellant's Opening Br. at 110 (pointing out that at trial, the FTC itself only contended "that the [2013] agreement foreclosed Intel from supplying chips for a mere five iPad models released over three years and 'perhaps' delayed Intel's ability to sell chips for the iPhone by one year").

not have the actual or practical effect of substantially foreclosing competition in the CDMA modem chip market.

Furthermore, "[a]s a general rule, '[p]ast wrongs are not enough for the grant of an injunction'; [instead,] an injunction will only issue if the wrongs are ongoing or likely to recur." *FTC v. Evans Prods. Co.*, 775 F.2d 1084, 1087 (9th Cir. 1985) (quoting *Enrico's, Inc. v. Rice*, 730 F.2d 1250, 1253 (9th Cir. 1984)); *see also* 15 U.S.C. § 53(b) (providing that the FTC "may" seek an injunction in federal district court only when the defendant "is violating, or is about to violate," one or more of the antitrust laws). Even if we were to agree with the district court that the Apple agreements were exclusive dealing contracts that substantially foreclosed competition in the relevant antitrust markets, it is undisputed that these agreements do not pose any current or future threat of anticompetitive harm. Despite the "clawback provisions," Apple itself terminated the agreements in 2015—two years before the FTC filed its action. Thus, while we agree with the district court that these were structured more like exclusive dealing contracts than volume discount contracts, they do not warrant the issuance of an injunction.

IV

Anticompetitive behavior is illegal under federal antitrust law. Hypercompetitive behavior is not. Qualcomm has exercised market dominance in the 3G and 4G cellular modem chip markets for many years, and its business practices have played a powerful and disruptive role in those markets, as well as in the broader cellular services and technology markets. The company has asserted its economic muscle "with vigor, imagination, devotion, and ingenuity." *Topco Assocs.*, 405 U.S. at 610. It has also "acted with sharp elbows—as businesses often do." *Tension Envelope Corp.*

v. JBM Envelope Co., 876 F.3d 1112, 1122 (8th Cir. 2017). Our job is not to condone or punish Qualcomm for its success, but rather to assess whether the FTC has met its burden under the rule of reason to show that Qualcomm's practices have crossed the line to "conduct which unfairly tends to destroy competition itself." *Spectrum Sports*, 506 U.S. at 458. We conclude that the FTC has not met its burden.

First, Qualcomm's practice of licensing its SEPs exclusively at the OEM level does not amount to anticompetitive conduct in violation of § 2, as Qualcomm is under no antitrust duty to license rival chip suppliers. To the extent Qualcomm has breached any of its FRAND commitments, a conclusion we need not and do not reach, the remedy for such a breach lies in contract and patent law. *Second*, Qualcomm's patent-licensing royalties and "no license, no chips" policy do not impose an anticompetitive surcharge on rivals' modem chip sales. Instead, these aspects of Qualcomm's business model are "chip-supplier neutral" and do not undermine competition in the relevant antitrust markets. *Third*, Qualcomm's 2011 and 2013 agreements with Apple have not had the actual or practical effect of substantially foreclosing competition in the CDMA modem chip market. Furthermore, because these agreements were terminated years ago by Apple itself, there is nothing to be enjoined.

We therefore **REVERSE** the district court's judgment and **VACATE** its injunction as well as its partial grant of summary judgment.

From: Holland, Caroline
Sent: Sun, 23 Aug 2020 14:08:18 +0000
To: Slaughter, Rebecca
Cc: Mark, Synda; King, Austin; Kopec, Janice; Batal, Mohamad; Goldstein, Elena; Greer, Kristin
Subject: (b)(5)
Attachments: (b)(5)

(b)(5)

Hi Becca,
Attached is our BC weekly wrap. Hope you're having a great weekend!
Best,
Caroline

(b)(5)

From: Kopec, Janice
Sent: Thu, 16 Jun 2022 14:07:27 +0000
To: Slaughter, Rebecca
Cc: Laroia, Gaurav; Batal, Mohamad
Subject: (b)(5)
Attachments: (b)(5)

(b)(5)

(b)(5)

From: Kopec, Janice
Sent: Wed, 10 Aug 2022 20:38:40 +0000
To: Slaughter, Rebecca
Cc: Greer, Kristin; Laroia, Gaurav
Subject: (b)(5)
Attachments: (b)(5)

(b)(5)

(b)(5)

(b)(5)

From: Laroia, Gaurav <glaroia@ftc.gov>
Sent: Wednesday, August 10, 2022 4:17 PM
To: Slaughter, Rebecca <rslaughter@ftc.gov>
Cc: Kopec, Janice <jkopec@ftc.gov>; Greer, Kristin <kgreer@ftc.gov>
Subject: (b)(5)

Hey Becca,

(b)(5)

Commercial Surveillance and Data Security

Public Forum

SEPTEMBER 8, 2022

2:00 pm	**Opening Remarks from Chair** **Lina M. Khan** Chair, Federal Trade Commission
2:10 pm	**Staff Presentation** **Josephine Liu** Assistant General Counsel for Legal Counsel, Federal Trade Commission
2:20 pm	**Remarks from Commissioner Slaughter** **Rebecca Kelly Slaughter** Commissioner, Location/Region, Federal Trade Commission
2:30 pm	**Panel 1: Industry Perspectives on Commercial Surveillance and Data Security** **Moderator:** **Olivier Sylvain** Office of Policy Planning, FTC **Panel 2: Consumer Advocate Perspectives on Commercial Surveillance and Data Security** **Moderator:** **Rashida Richardson** Office of the Chair, FTC
4:45 pm	**Remarks from Commissioner Bedoya** **Alvaro Bedoya** Commissioner, Federal Trade Commission
5:00 pm	**Public Remarks**

United States Senate
WASHINGTON, DC 20510

September 20, 2021

The Honorable Lina Khan
Chair
Federal Trade Commission
600 Pennsylvania Avenue, NW
Washington, DC 20580

Dear Chair Khan,

We write to encourage the Federal Trade Commission (FTC) to begin a rulemaking process to protect consumer privacy, promote civil rights, and set clear safeguards on the collection and use of personal data in the digital economy. As Congress continues to develop national privacy legislation, FTC action on this front will ensure that Americans have every tool at their disposal to protect their privacy in today's online marketplace.

Consumer privacy has become a consumer crisis. Big Tech companies have used their unchecked access to private personal information to create in-depth profiles about nearly all Americans and to protect their market position against competition from startups. Consumers have been forced to accept continuous data breaches and security lapses that compromise their intimate personal records. Americans' identities have become the currency in an unregulated, hidden economy of data brokers that buy and sell sensitive information about their families, religious beliefs, healthcare needs, and every movement to shadowy interests, often without their awareness and consent. Meanwhile, communities of color have faced setbacks in the fight to protect their civil rights as new forms of discrimination have proliferated on social media platforms. This sustained failure has fostered a market that punishes companies for protecting and respecting users, rather than rewarding pro-consumer practices.[1]

We believe that a national standard for data privacy and security is urgently needed to protect consumers, reinforce civil rights, and safeguard our nation's cybersecurity. Accordingly, and in parallel to congressional efforts to create federal privacy laws to give power back to consumers, the Commission should take advantage of every tool in its toolkit to protect

[1] *Axios|SurveyMonkey poll: privacy deep dive.* March 2019. https://www.surveymonkey.com/curiosity/surveymonkey-axios-poll-privacy-deep-dive/

consumers' privacy. Continuous high-profile and costly privacy violations and data breaches have shown the limits of the FTC's general prohibition on unfair and deceptive practices. Big Tech companies have routinely broken their promises to consumers and neglected their legal obligations, only to receive wrist-slap punishments after long delay, providing little relief to consumers, and with minimal deterrent effect.

We urge the Commission to undertake a rulemaking process with the goal of protecting consumer data; the rulemaking should consider strong protections for the data of members of marginalized communities, prohibitions on certain practices (such as the exploitative targeting of children and teens), opt-in consent rules on use of personal data, and global opt-out standards[2]. Under the FTC Act, the Commission is able to promulgate rules to define and prevent business practices that violate our consumer protection law's prohibition on unfair or deceptive acts or practices. FTC Commissioners Chopra, Slaughter, and Wilson, and former FTC Chairs have all provided compelling arguments that unfair and deceptive practices are prevalent in the digital economy and that the market has failed consumers. These arguments are bolstered by the FTC's enforcement record, numerous staff reports, and revealing market investigations.[3] This record provides a powerful and compelling basis for urgent action.

The FTC has substantial institutional knowledge and expertise to contribute to the legislative process through its track record of enforcement and its existing privacy authorities, such as those under the Children's Online Privacy Protection Act and the Fair Credit Reporting Act. An FTC rulemaking initiative would contribute to congressional efforts to develop federal privacy legislation through the research, public comment record, and dialogue required under the Commission's rulemaking procedure under the Mag-Moss process.[4]

Consumers deserve strong and enforceable privacy safeguards in the digital economy – opening a rulemaking would be a powerful step toward addressing this long overdue need.

---

[2] Such as the Global Privacy Control recognized by California's consumer privacy laws. https://oag.ca.gov/privacy/ccpa

[3] *Joint Statement of FTC Commissioners Chopra, Slaughter ,and Wilson*. December 2019. https://www.ftc.gov/system/files/documents/public_statements/1584150/joint_statement_of_ftc_commissioners_chopra_slaughter_and_wilson_regarding_social_media_and_video.pdf
FTC. List of Privacy Cases. https://www.ftc.gov/enforcement/cases-proceedings/terms/245%2B247%2B249%2B262

[4] Commissioner Slaughter. *The Near Future of U.S. Privacy Law.* September 6, 2019. https://www.ftc.gov/system/files/documents/public_statements/1543396/slaughter_silicon_flatirons_remarks_9-6-19.pdf
Indeed, Congress and FTC Commissioners have, on a bipartisan basis, recognized the need for the Commission to write and update rules on consumer privacy to set standards that follow changes in technologies and business practices. See also:
Prepared Remarks of Chairman Joseph J. Simons, Hearing on "Oversight of the Federal Trade Commission: Strengthening Protections for American's Privacy and Data Security" Committee on Energy and Commerce Subcommittee on Consumer Protection and Commerce. May 8, 2019. https://www.ftc.gov/system/files/documents/public_statements/1519226/2019_ec_oral_remarks.pdf

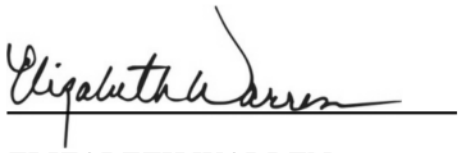
Thank you for your attention to this important matter.

Sincerely,

RICHARD BLUMENTHAL
United States Senate

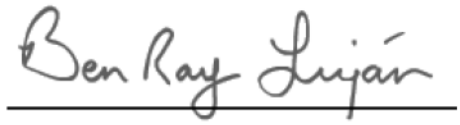
BRIAN SCHATZ
United States Senate

RON WYDEN
United States Senate

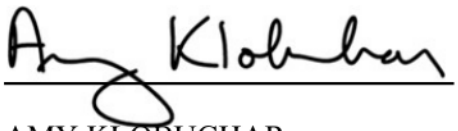


ELIZABETH WARREN
United States Senate

CHRISTOPHER A. COONS
United States Senate

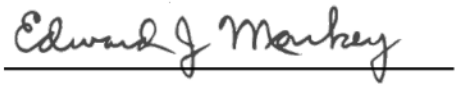


BEN RAY LUJÁN
United States Senate



AMY KLOBUCHAR
United States Senate

CORY A. BOOKER
United States Senate



EDWARD J. MARKEY
United States Senate